



CS series

Operation Manual



Operation Manual

**MODEL "CS SERIES" VERSION 2010-00, published
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1.GENERAL SAFETY INSTRUCTIONS

This is an electric machine user manual, in which operation, maintenance and safety information are specified. Please read and file it carefully.

After unpacking, please check to ensure your machine has not been damaged during the shipping. Please notify your service representative or qualified technician regarding all questions or concerns before installing. Please note that the machine package material, including plastic bag and Styrofoam, can be dangerous and should be kept out of reach of children.

There is an identification label stuck in the front of unit. Before operating, please check to ensure the power source corresponds to the rating shown on the identification lable. The manufacturer doesn't take responsibility due to improper install and usage.

Please use separate power source which corresponds to the unit's power rating.

Please use No Fuse Breaker (NFB) that conforms to the safety regulation separately. Do NOT use a socket. The NFB should have a minimum contact space of 3 mm and provide electrical spike and drain protection. The ampere must be sufficient for providing the required electric current to this machine.

Be sure to use a grounded power source to prevent electric shock and ensure the safety of this machine and relative personnel.

The machine must be used in accordance with its original design. Additional use is inappropriate and dangerous. Injury or loss caused by wrong use or operation mistake will be beyond our responsibility.

Following rules must be obeyed when using electric device:

- .Don't touch machine with wet hands or feet
- .Don't touch machine with bare foot
- .Don't pull the cord in order to disconnect from power source
- .Don't expose this machine to rain or sunlight directly
- .Don't let children and mentally challenged people use this machine

The temperature of the steam wand, hot water wand and brewing group is very high. Don't expose your hands to them, never touch, or your get injured by high temperature.

Please follow maintenance and cleaning instructions specified in this manual to ensure the best operation efficiency of machine.

If the machine broke down or functioned abnormally, please turn off machine and its power source and notify professional maintenance personnel to fix; any damage of electronic appliance will lead to certain danger, please don't fix it by yourself. We are not responsible for the behavior conducted by not authorized service personnel take apart or fix the machine.

Please use filtered and softened water. If using groundwater or tap water for brewing coffee or tea, please soften it first. Unsoftened water will decompose dissolvable minerals and turn to limescale after boiling. The limescale will reduce the machine's thermal efficiency and machine's lifetime.

Machine refills water automatically. The light on touch panel will flash as self-detection if water flow into machine exceeds two minutes (see Trouble Shooting Section), and power will be cut off automatically to protect the system. To resume normal functions, turn off the machine for 2-3 seconds and turn on the machine again.

For ETL listed machine, The heating element will not operate when water in the machine is less than the minimum required level. When starting the machine without any water in the tank, heating will be delayed for about 60 seconds.

For CE and KC (Korea Certificate) listed machine, when you initiate the machine, or any need to turn on the machine after machine is not used for a long time, please firstly make sure the water supply is normal, and press every continuously flow button until the water flows for more than 5 seconds. After you confirm the water flows for more than 5 seconds, you can turn the main switch to position 2 to heat up the machine. This is to protect heating element from damage.

Before the use of machine, you must confirm there isn't any frozen water inside the boiler. Even though the machine hasn't been installed, the temperature for water must be kept over the freezing point. The damage caused by frozen water inside the tube or boiler won't be covered by the manufacturer.

Machine is shipped from factory with water drained from boiler and exchanger. Please ensure the machine to be drained completely before it is removed and put away for storage. If water gets frozen inside the pipes and boiler of the machine, it can damage machine. For install and removal of the machine, please contact qualified service person.

2.MACHINE SPECIFICATIONS

2-1 Identification Label

Every machine has an identification label placed on the front of the machine as illustrated below. The label includes information of model number, voltage, serial number, wattage, and its certificate. Please do not remove this label in order for technician to check electrical information in the future.

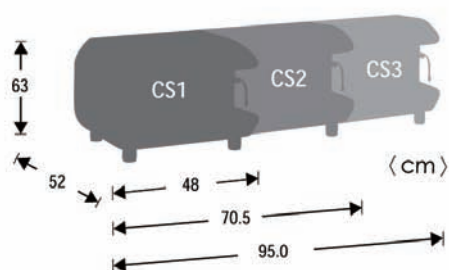


Model	
Serial No.	
Power Supply	

2-2 Specification Table

ESPRESSO

CS Series Espresso Machine
Model : CS1、CS2、CS3



Model	Group	Boiler Capacity	Voltage	Watts	Hertz	Weight
CS1	1	6L	220/240	2500	50/60	54kg
CS2	2	12L	220/240	4700	50/60	65kg
CS3	3	18L	220/240	6500	50/60	87kg

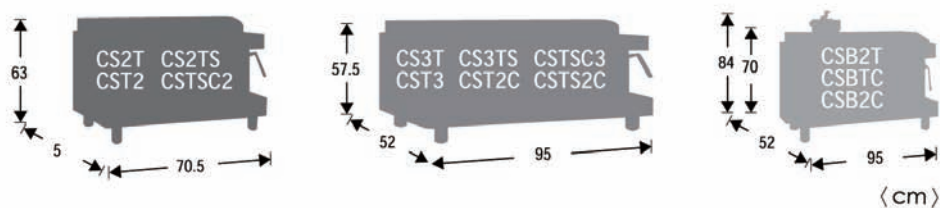
Color ■

TEAPRESSO

CS Series Teapresso Machine

Model	Teapresso Brewing Unit	High Volume Brewing Unit	Boiler Capacity	Preheat Boiler Capacity	Built in Steam Outpour in Tea Brewing Unit	Voltage	Watts	Hertz	Weight
CS2T	2		6L	6L		220/240	6500	50/60	68kg
CS2TS	2		6L	6L	V	220/240	6500	50/60	68kg
CS3T	3		12L	6L		220/240	6900	50/60	90kg
CS3TS	3		12L	6L	V	220/240	6900	50/60	90kg
CSB2T	2	1	12L	6L	V	220/240	6900	50/60	113kg

Color ■



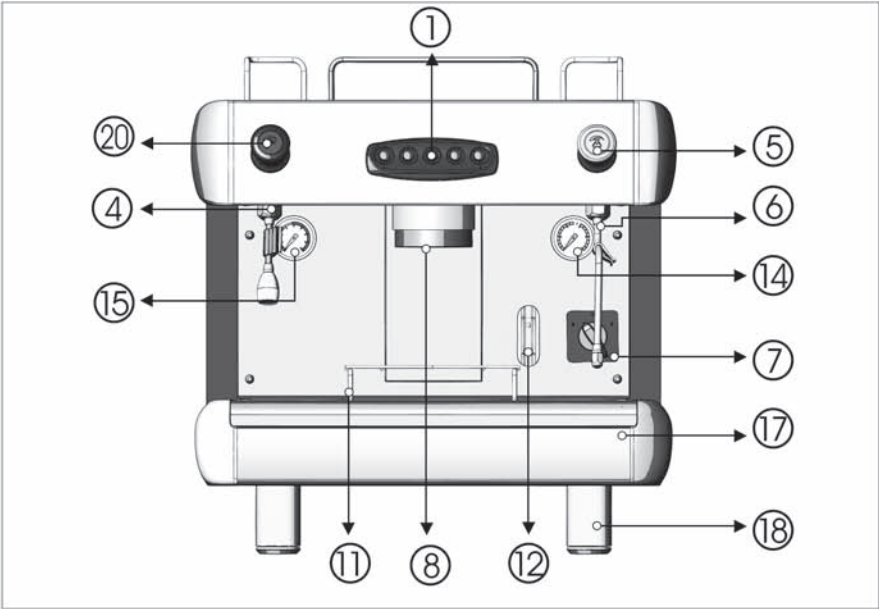
TEA & ESPRESSO

CS Series Tea & Espresso Combo Machine

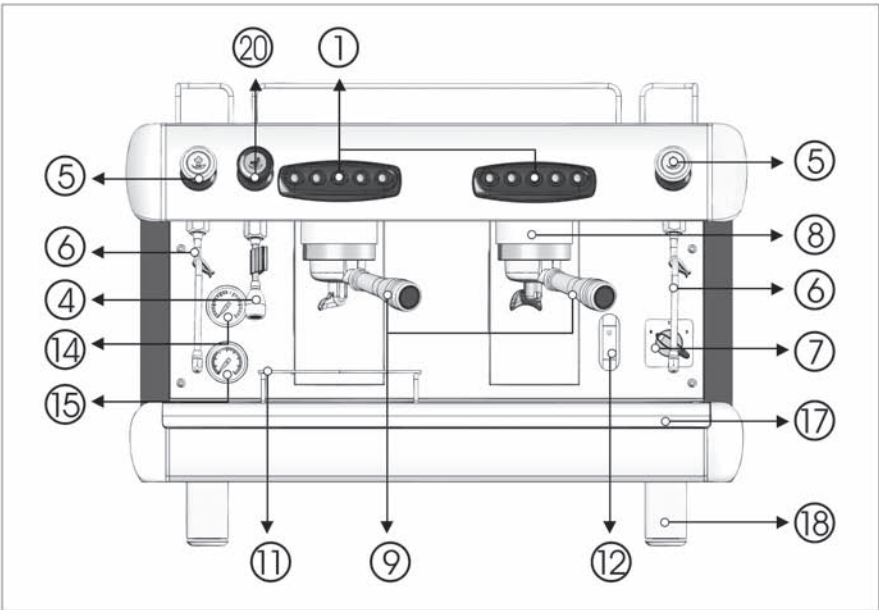
Model	Teapresso Brewing Unit	Espresso Brewing Unit	High Volume Brewing Unit	Boiler Capacity		Built in Steam Outpour in Tea Brewing Unit	Voltage	Watts	Hertz	Weight
				Teapresso	Espresso					
CST2	1	1		6L	6L		220/240	5500	50/60	68kg
CSTSC2	1	1		6L	6L	V	220/240	5500	50/60	68kg
CST3	2	1		6L	12L		220/240	7000	50/60	90kg
CSTSC3	2	1		6L	12L	V	220/240	7000	50/60	90kg
CST2C	1	2		6L	12L		220/240	7000	50/60	90kg
CSTS2C	1	2		6L	12L	V	220/240	7000	50/60	90kg
CSBTC	1	1	1	6L	12L	V	220/240	7000	50/60	113kg
CSB2C	1	2	1	6L	12L	V	220/240	7000	50/60	113kg

3.MACHINE OVERVIEW

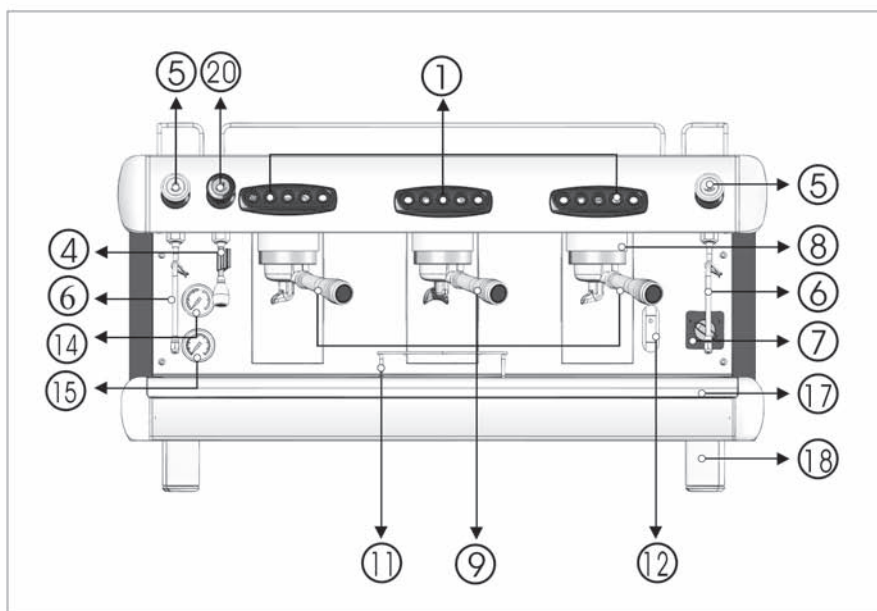
3-1 Espresso machine



CS1



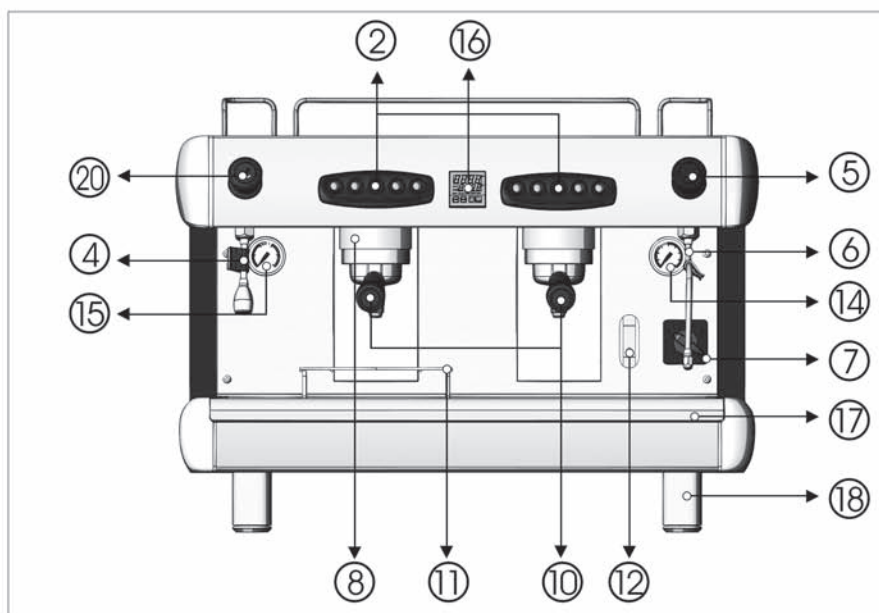
CS2



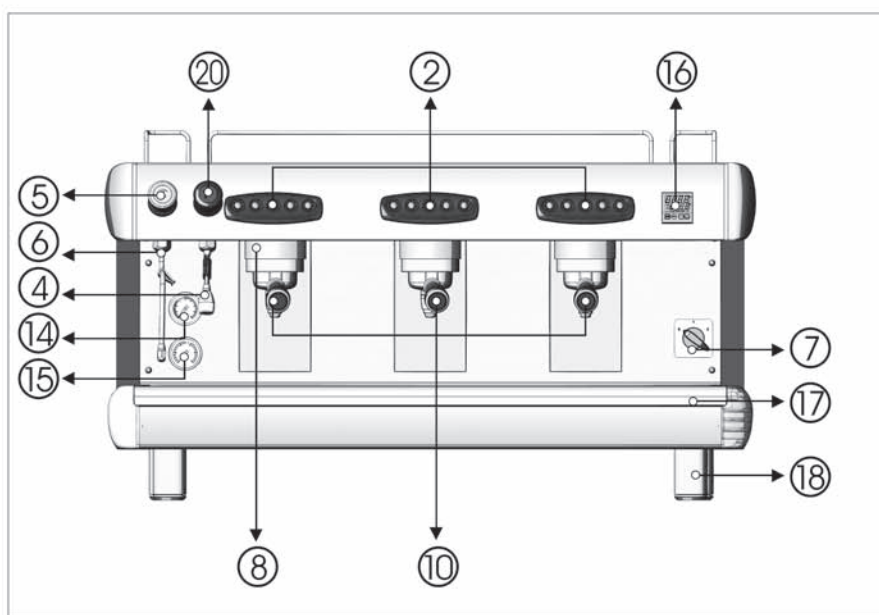
CS3

①	Espresso brewing unit control panel	⑪	Cup rack
②	Teapresso brewing unit control panel	⑫	Sight Glass (Boiler level check window)
③	High volume brewing unit control panel	⑬	2 in 1 steam boiler & pump pressure gauge
④	Hot water wand	⑭	Steam boiler pressure gauge
⑤	Steam knob	⑮	Pump pressure gauge
⑥	Steam wand	⑯	Temperature controller
⑦	Main switch	⑰	Drain Tray
⑧	Brewing group	⑱	Foot
⑨	Espresso filter holder	⑲	High volume brewing head
⑩	Teapresso filter holder	⑳	Hot water knob

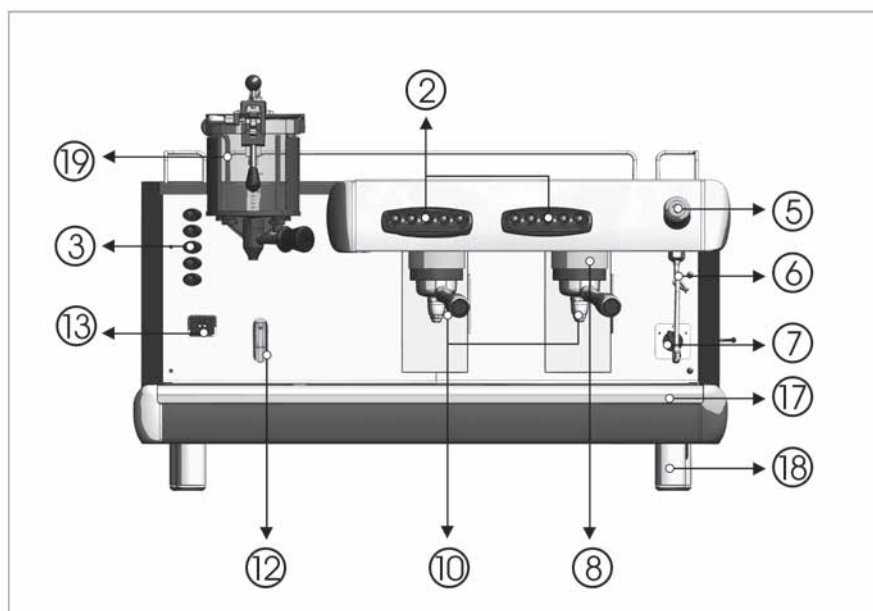
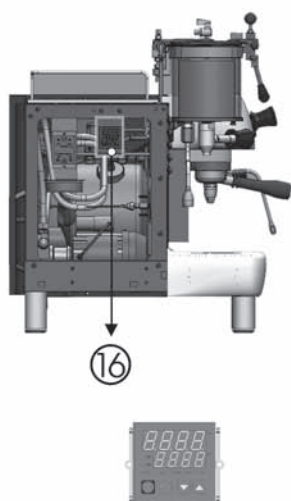
3-2 Teapresso machine



CS2T/CS2TS



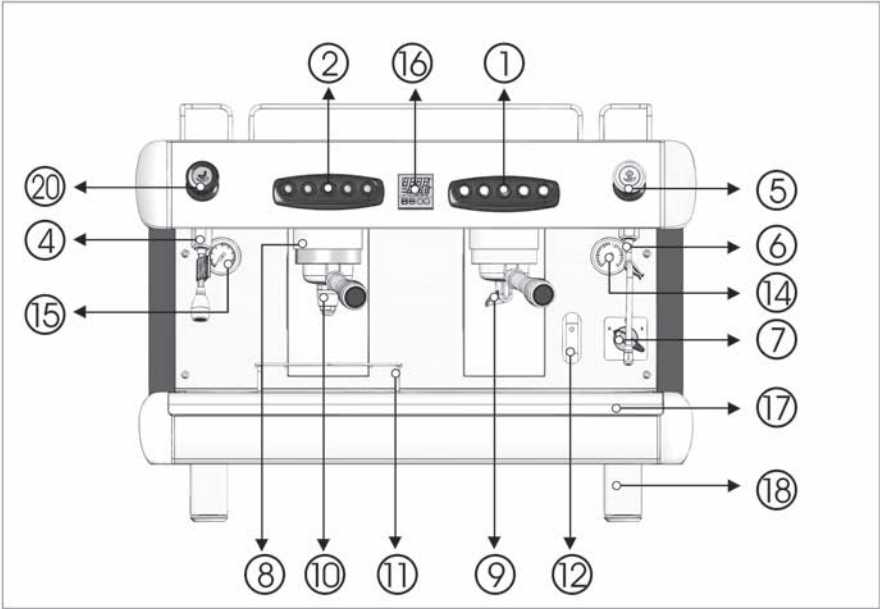
CS3T/CS3TS



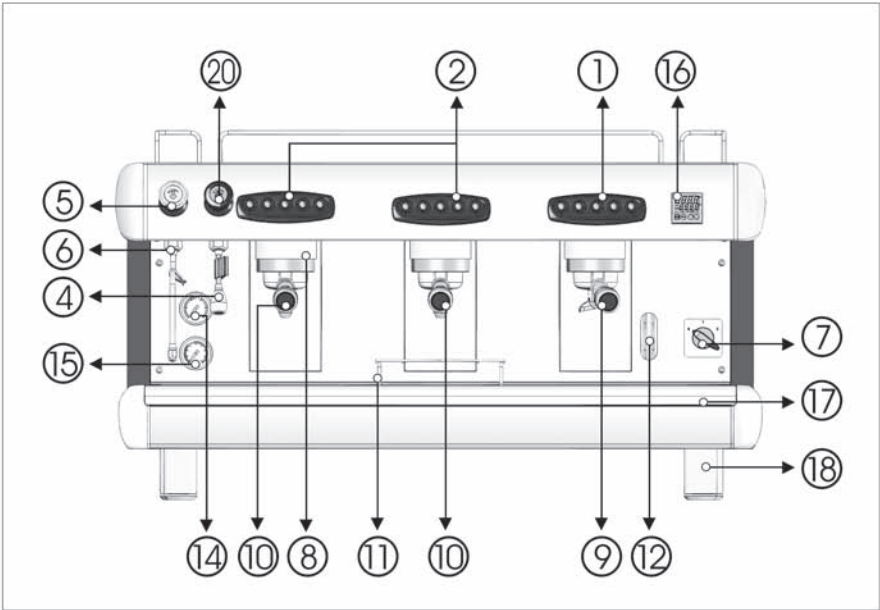
CSB2T

①	Espresso brewing unit control panel	⑪	Cup rack
②	Teapresso brewing unit control panel	⑫	Sight Glass (Boiler level check window)
③	High volume brewing unit control panel	⑬	2 in 1 steam boiler & pump pressure gauge
④	Hot water wand	⑭	Steam boiler pressure gauge
⑤	Steam knob	⑮	Pump pressure gauge
⑥	Steam wand	⑯	Temperature controller
⑦	Main switch	⑰	Drain Tray
⑧	Brewing group	⑱	Foot
⑨	Espresso filter holder	⑳	Hot water knob
⑩	Teapresso filter holder		

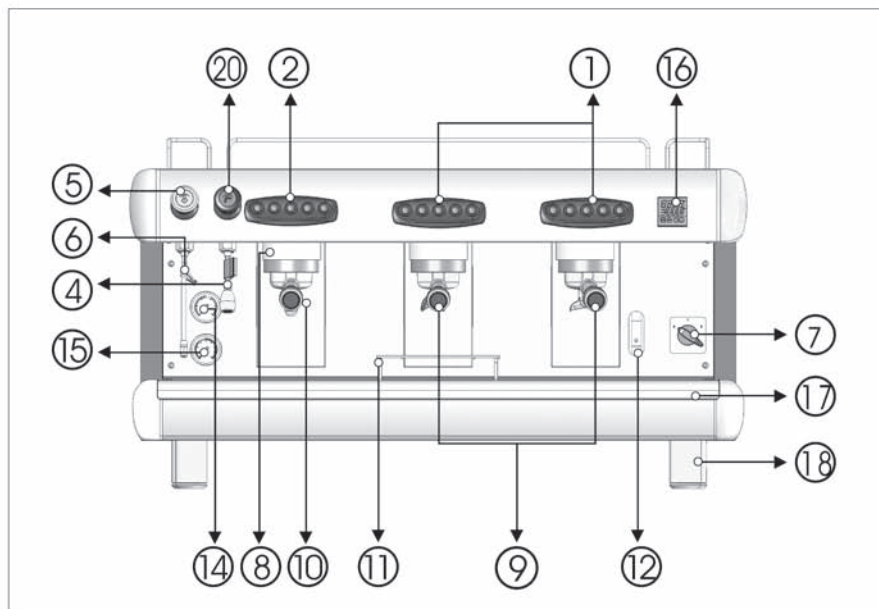
3-3 Tea & Espresso combo machine



CST2/CSTSC2

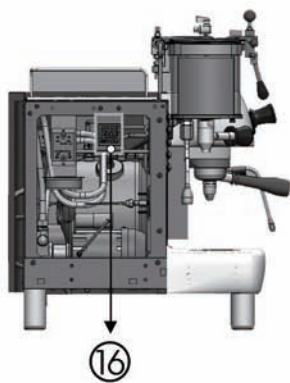
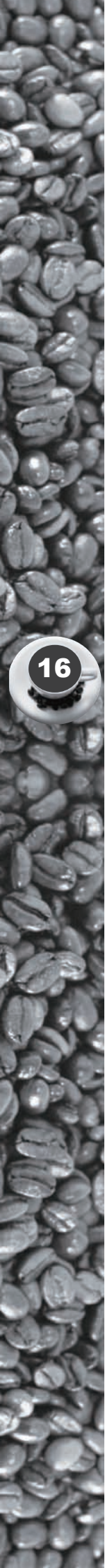


CST3/CSTC3

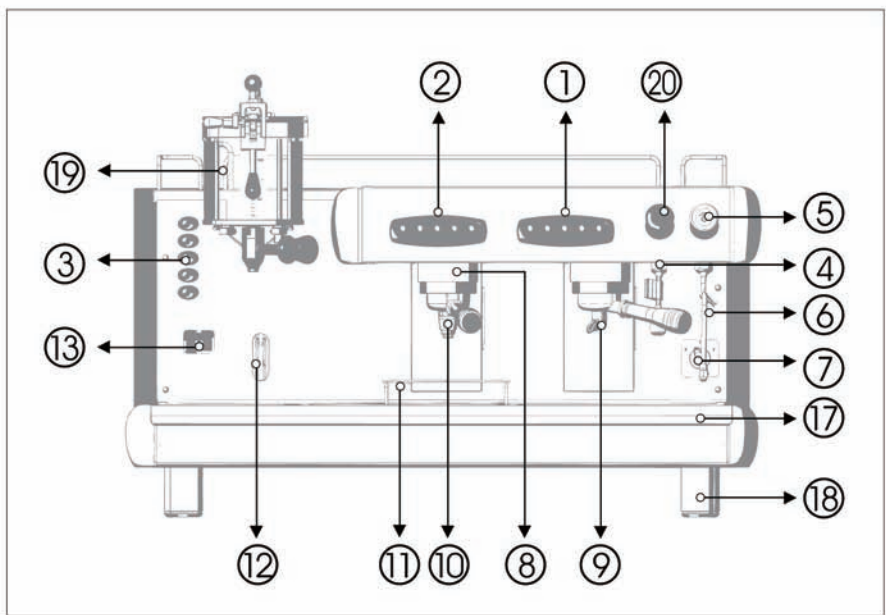


CST2C/CSTS2C

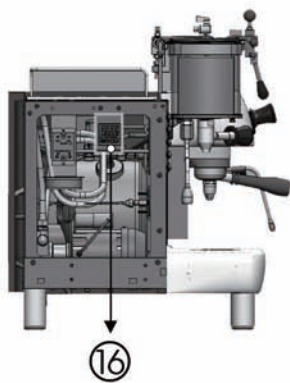
①	Espresso brewing unit control panel	⑪	Cup rack
②	Teapresso brewing unit control panel	⑫	Sight Glass (Boiler level check window)
③	High volume brewing unit control panel	⑬	2 in 1 steam boiler & pump pressure gauge
④	Hot water wand	⑭	Steam boiler pressure gauge
⑤	Steam knob	⑮	Pump pressure gauge
⑥	Steam wand	⑯	Temperature controller
⑦	Main switch	⑰	Drain Tray
⑧	Brewing group	⑱	Foot
⑨	Espresso filter holder	⑲	High volume brewing head
⑩	Teapresso filter holder	⑳	Hot water knob



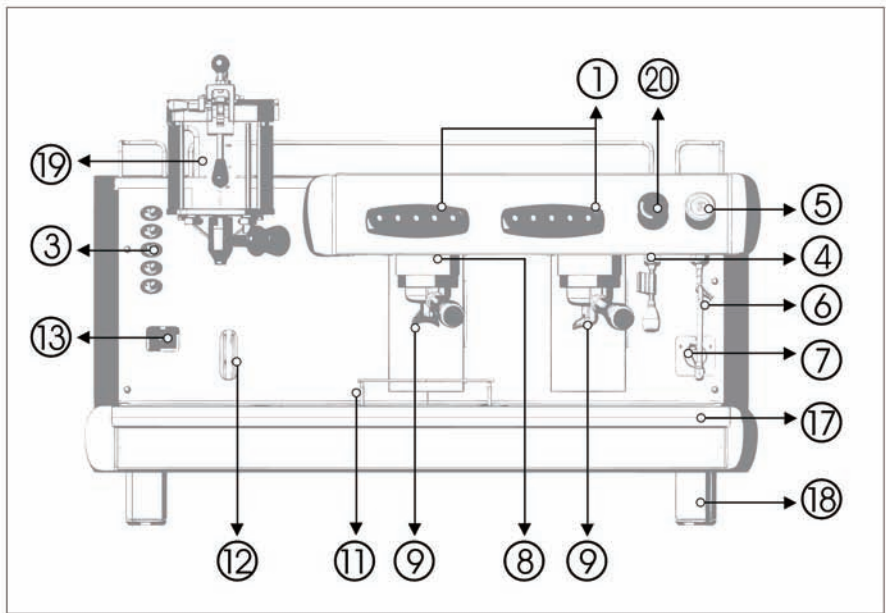
16



CSB2C



16

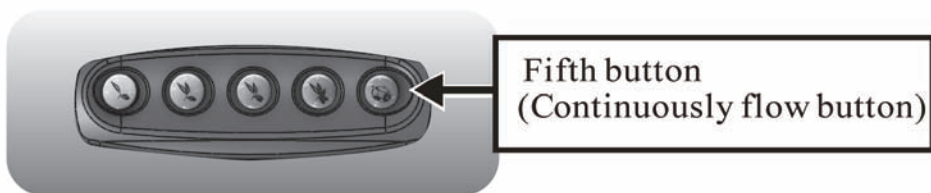


CSB2C

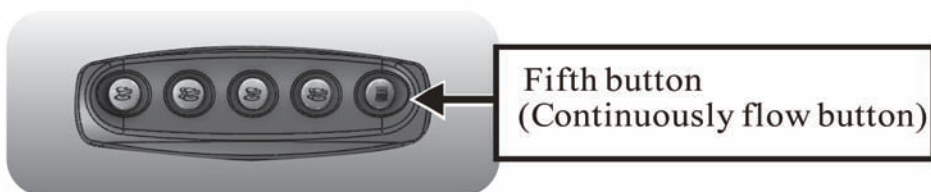
①	Espresso brewing unit control panel	⑪	Cup rack
②	Teapresso brewing unit control panel	⑫	Sight Glass (Boiler level check window)
③	High volume brewing unit control panel	⑬	2 in 1 steam boiler & pump pressure gauge
④	Hot water wand	⑭	Steam boiler pressure gauge
⑤	Steam knob	⑮	Pump pressure gauge
⑥	Steam wand	⑯	Temperature controller
⑦	Main switch	⑰	Drain Tray
⑧	Brewing group	⑱	Foot
⑨	Espresso filter holder	⑲	High volume brewing head
⑩	Teapresso filter holder	⑳	Hot water knob

3-4 Control panel description

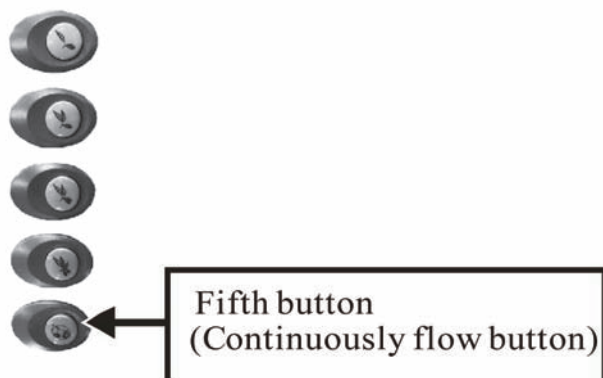
3-4-1 Teapresso brewing unit control panel



3-4-2 Espresso brewing unit control panel



3-4-3 High volume brewing unit control panel



4.INSTALLATION

4-1 Water & Electrical Connection

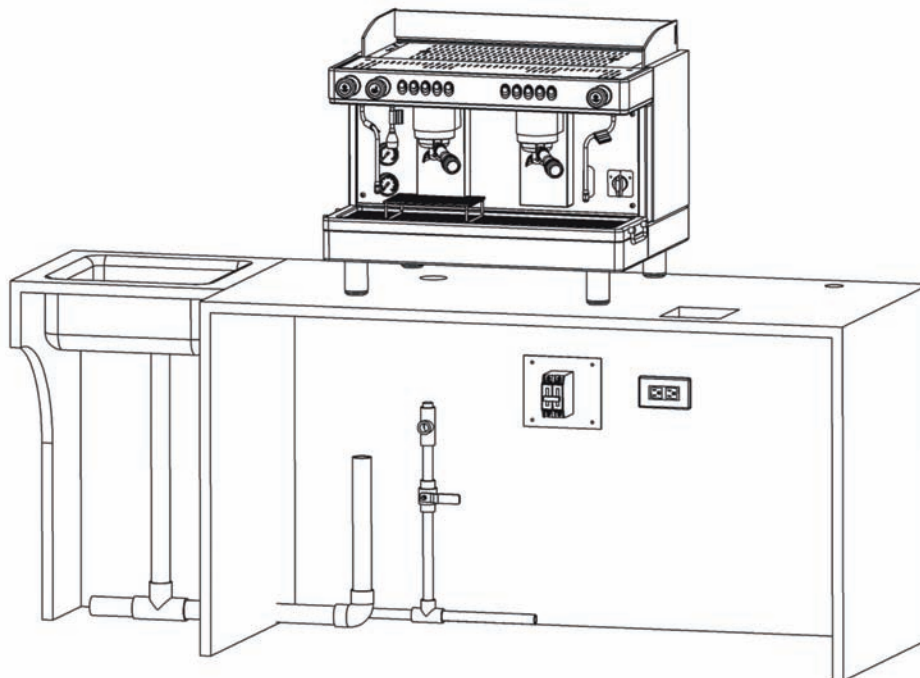
4-1-1 Machine is equipped with a stainless steel pipe with female PF 1/2"ID.
In case any need to connect additional pipe, please use pipe with PF 1/2" OD.

4-1-2 Machine is equipped with a drain pipe with 18mm size (Outer diameter).

4-1-3 Machine must apply 220V-240V, single phase electrical system.

4-1-4 Please use an independent, No Fuse Breaker (NFB) that conform to the safety regulation separately, do not use a socket. The NFB should have a minimum contact space of 3 mm and provide electrical spike and drain protection.

4-2 Install Illustration



5-OPERATION PRECAUTIONS

Read this manual carefully before using your machine.

Do not use the machine and turn off the power when water outage.

When operating the machine for the first time or replacing water softener and filtration system, remove the water inlet tube and allow it to drain for about one minute in order to get rid of impurities from the water.

Please check and confirm normal water supply before turning on power.

Please check and make sure brewing group with water delivery when press continuously flow buttons. Operating the machine when brewing group has no water delivery may cause the electric heating element to overheat and burn out.

After installing the machine, please check to make sure that, during water intake, steam boiler pressure gauge indicator is within the green zone (1~1.4bar) and the pump pressure gauge indicator is also within the green zone (8~10bar). In case any need to adjust the pressure, please refer to calibration section.

The temperature of the steam wand, hot water wand and brewing unit is very high. Don't expose your hands to them, never touch, or your get injured by high temperature.

To avoid overheating, electric wires should be kept untangled and free of obstructions. Don't block air intake or outlet vents on the machine. Never cover or otherwise prevent the free flow of air across the cup warmer.

Please wipe the accessories with a soft cloth or specific detergent powder. Don't use scrub sponge or wire brushes.

After machine power has been switched off, always let the machine set for at least 3 seconds before restarting.

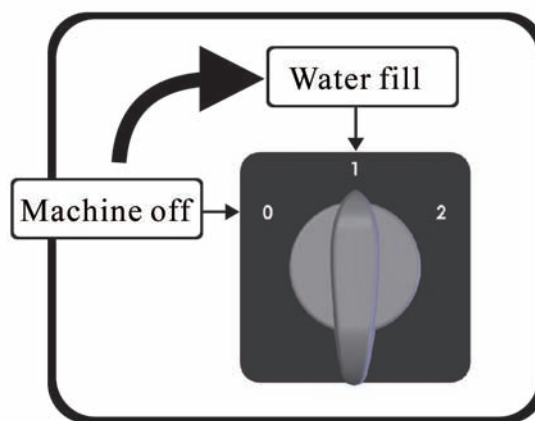
Place an appropriate quantity of ground coffee in the filter cup and tamps the ground coffee firmly. Clean all residual coffee from the rim and sides of the filter. This is to ensure a good seal and full pressure when brewing coffee, and prolong the lifetime of group gasket.

6.STARTING UP

After water supply and electrical connections have been made, please proceed to initiate the machine.

6-1 CE, KC (Korea Certificate) listed machine start up the machine as below:

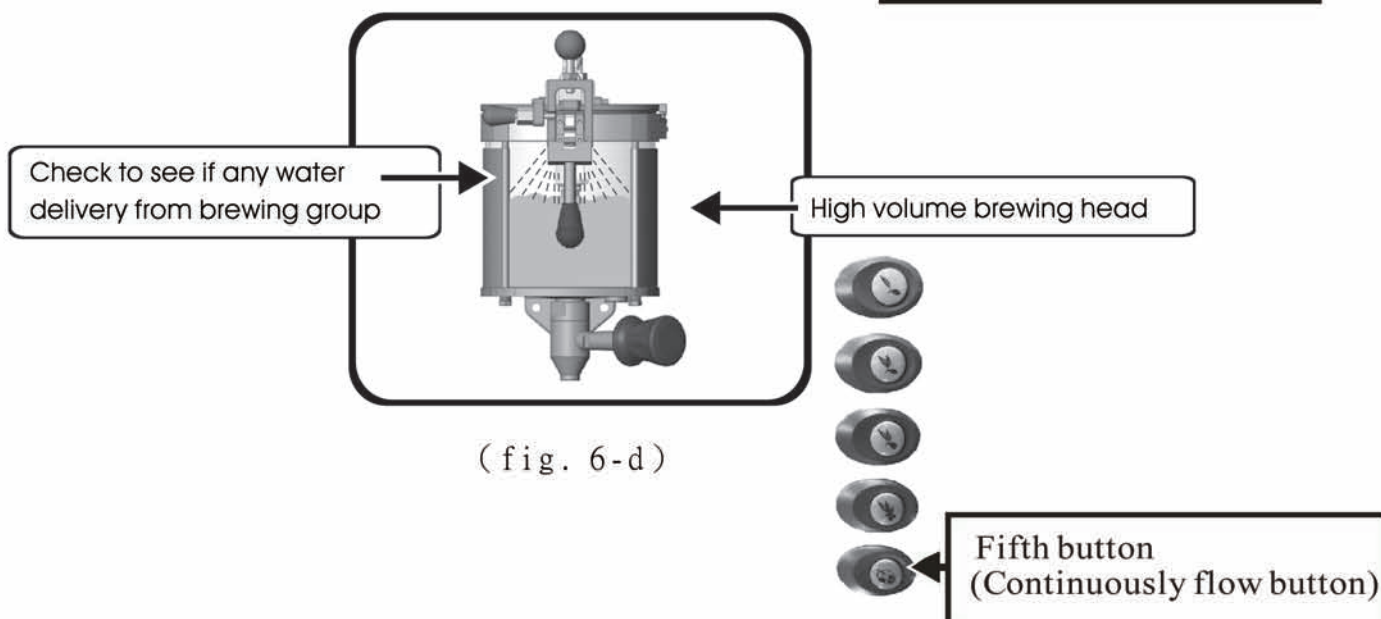
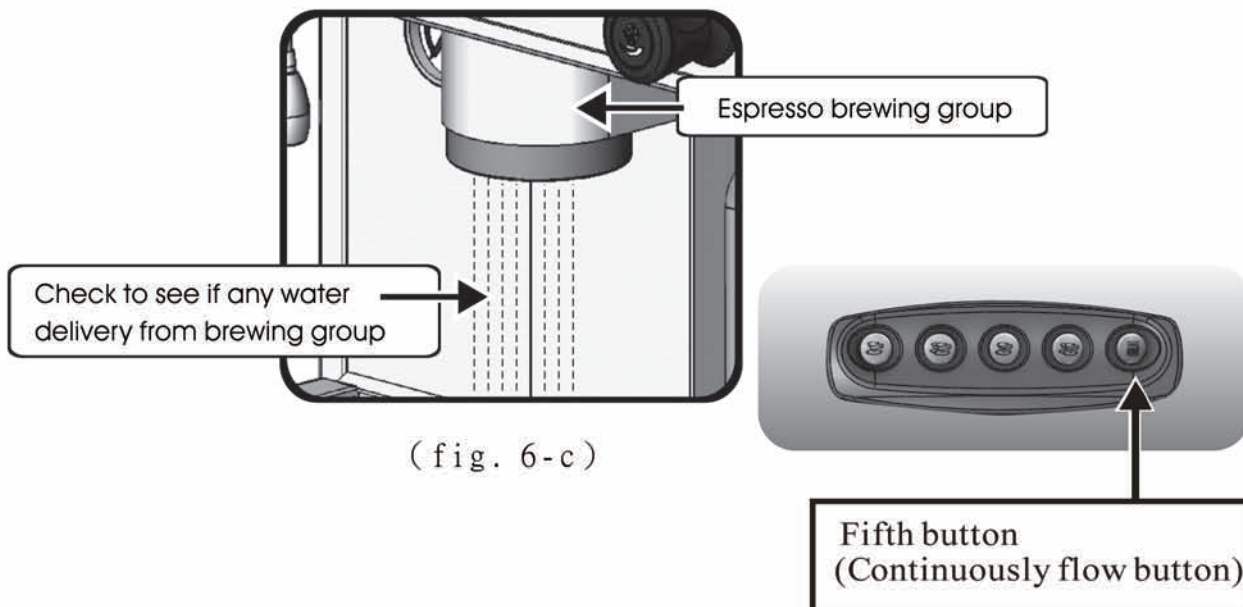
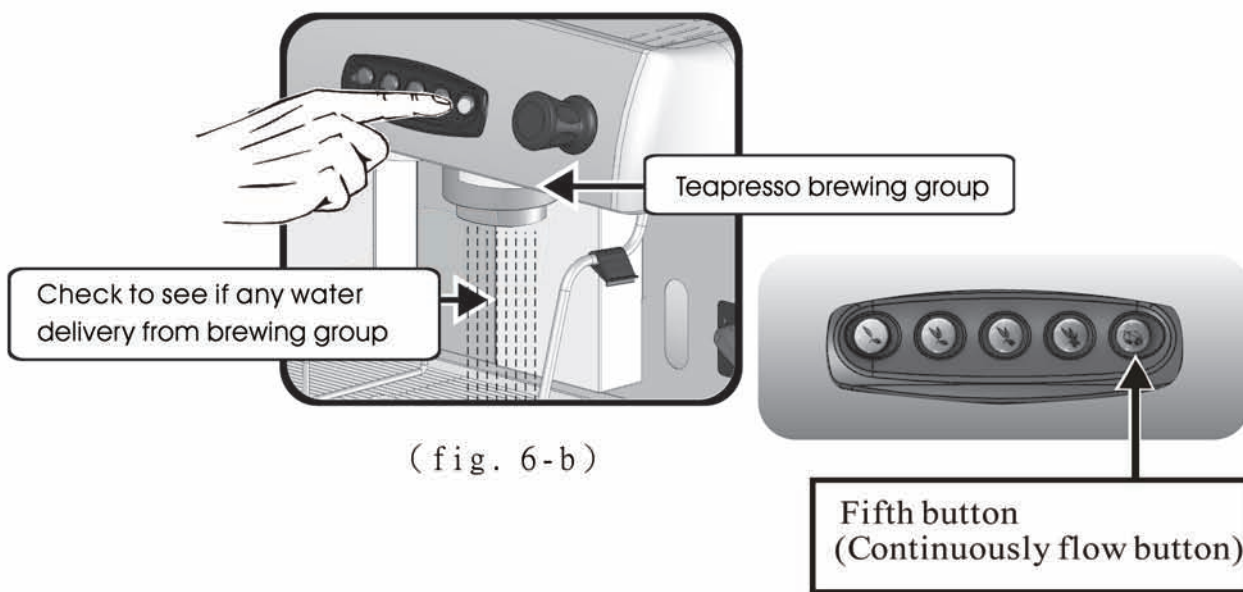
- a. Please turn the main switch to position 1 to refill water into exchange boiler. Self-detection program will be initiated and lights will flash from left buttons to right.(see fig 6-a)
- b. Please wait for 2-3 minutes for water refill into exchanger system
- c. After 2-3 minutes, please press “continuously flow button” (the fifth button) on each control panel (See fig. 6-b,c,d) to check if any water delivery from brewing group. If so, please proceed to next step. If not, please check if water supply is normal.



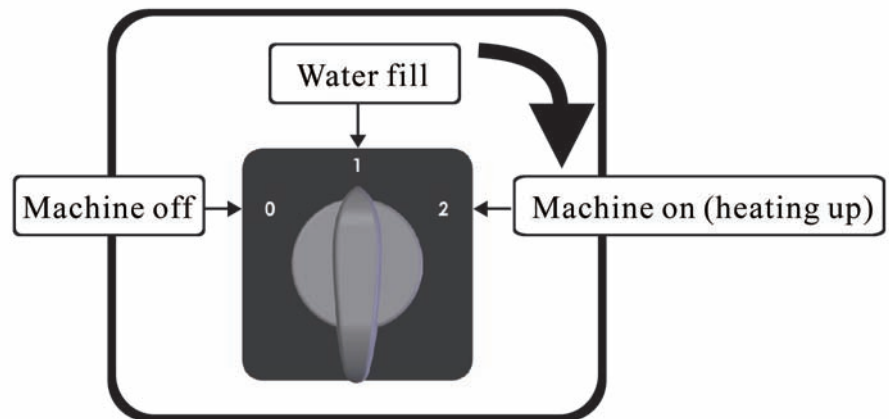
(fig. 6 - a)

Note: For all teapresso machine and tea & espresso combo machine, motor is initiated by pressing fifth button. So please press fifth button to ensure automatic water filling.

Note: Please make sure there is water delivery from brewing group before you proceed to next step to avoid to damage of heating element.



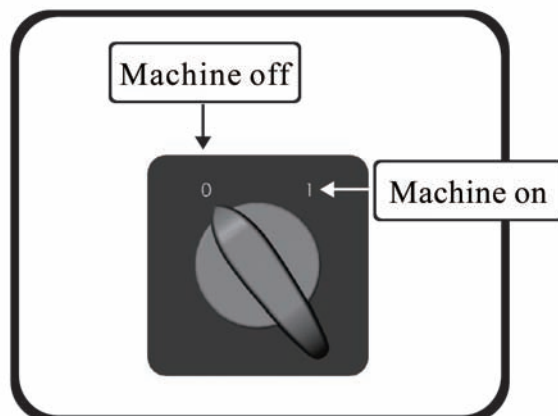
- d. Turn the main switch to position “2” to heat up the machine. After about 20 minutes, the heating sounds stop, the machine is heated. .



(fig. 6-e)

6-2 ETL Listed machine: CS1, CS2, CS3

Please turn the main switch to position 1 directly and the machine will refill and heat up automatically.



(fig. 6-f)

7.CALIBRATION

7-1 Pump pressure adjustmen

The manufacturer has already adjusted the pump pressure to be 9 bar (the best recommended pressure) when machine is tested in the factory.

After machine starts up and water refills, please press continuously flow button and read pressure on your pressure gauge to see if the pressure is 9bar or if the indicator is on green zone (8-10bar) as shown in the below. If yes, the pressure is correct. If not, you may need to adjust pressure as shown below:

NOTE: Please contact your service representative to undertake this operation.

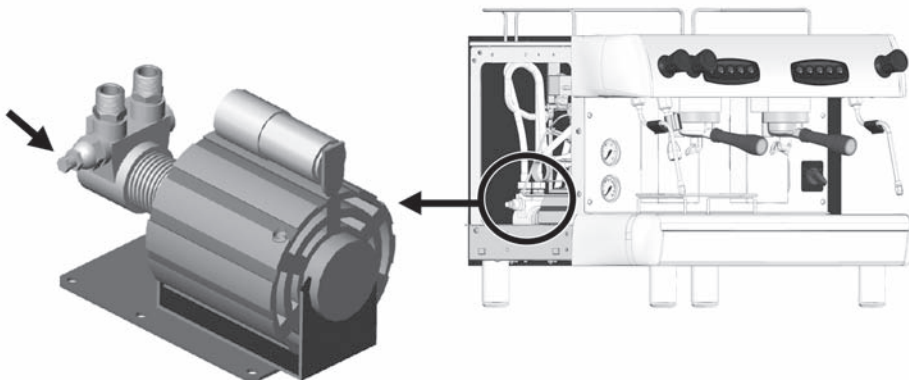
Please attach portafilter into the brewing group with filled ground coffee. Press continuously flow and stop button. Use the screw to turn the pump clockwise as shown in below picture to increase pressure, while turn counterclockwise to reduce pressure.



(fig. 7-a)



(fig. 7-b)



(fig. 7-c)

7-2 Steam boiler pressure calibration

Boiler pressure adjustment is only applied on below models:

-espresso machine:CS1, CS2, CS3

-tea & espresso machine (espresso side's boiler): CST2, CSTSC2, CST3, CSTSC3, CSBTC,CST2C, CSTS2C, CSB2C

Steam boiler pressure is controlled by pressure switch. The pressure inside the boiler continues to rise as the water is heated by the heating elements. Reducing pressure is reducing temperature, while increasing pressure is increasing temperature. The manufacture has already adjusted the pressure to be 1.2bar, which is the best recommended pressure. Please check if your pressure on the pressure switch is 1.2bar or on the green zone (1-1.4bar) (see fig 7-e, 7-e). if so, you don't need to adjust the pressure. In case there is a need to calibrate the pressure, please follow below procedure for calibration:

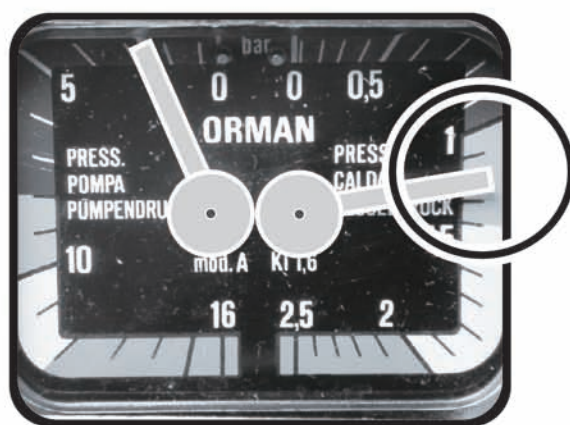
NOTE: Please turn off the machine before undertaking this operation.

NOTE: please contact your service representative to conduct this.

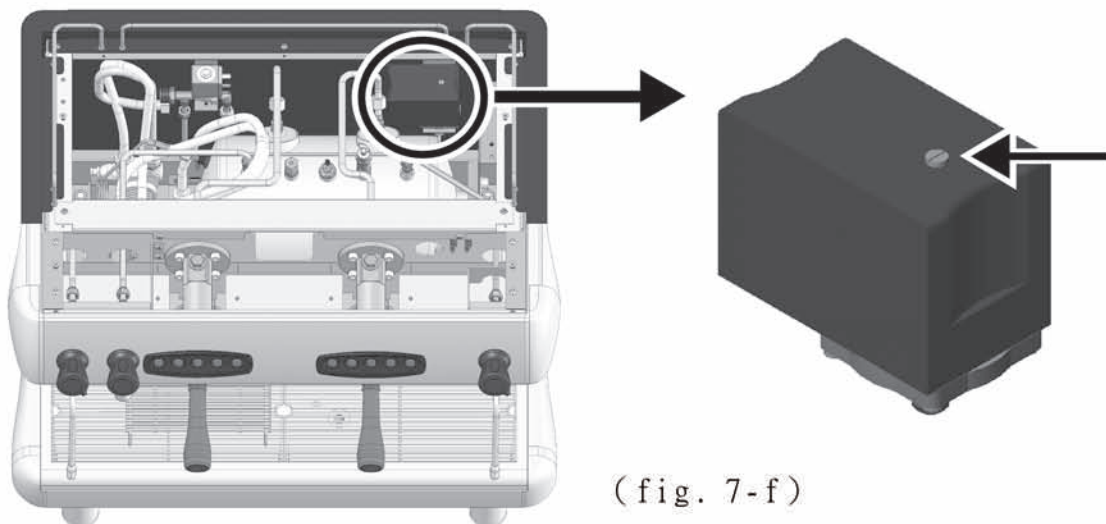
Take apart of the top plate on the machine, and locate the pressure switch on the up right size. Remove the yellow case from the pressure switch. Use screw to adjust the pressure as shown in below fig 7-f. Turn it clockwise to decrease pressure, while counterclockwise to increase pressure. A complete screw turn results in 0.1 bar variation.



(fig. 7-d)



(fig. 7-e)



(fig. 7-f)

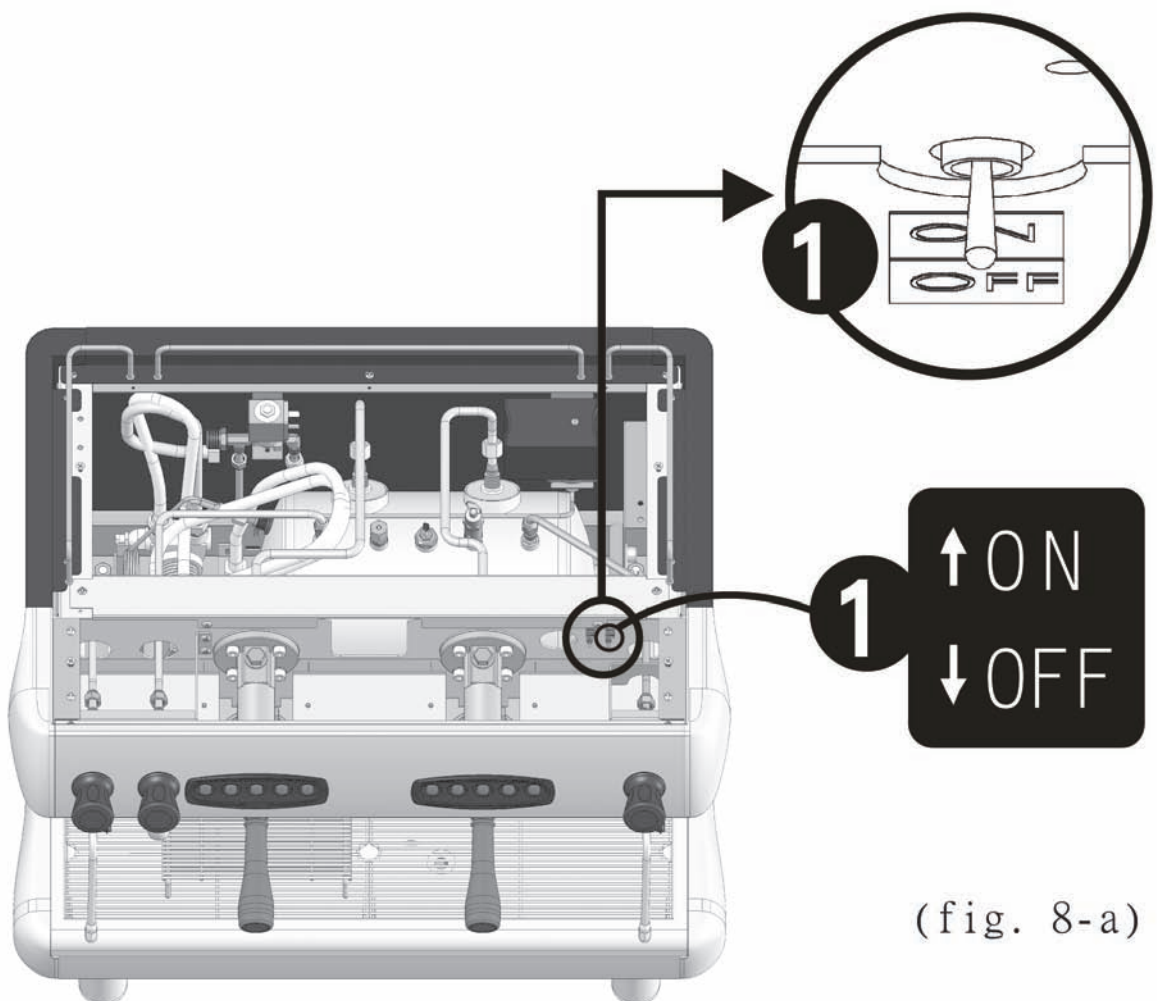
8.PROGRAMMING

NOTE: there is not presetting in the factory. Please contact your service representative to consult tea & espresso programming detail. If you have had programming detail in hand, you may follow the steps below to set up the machine with stop watch and measuring cup..

8-1 Espresso brewing unit:only for CS1,CS2 and CS3

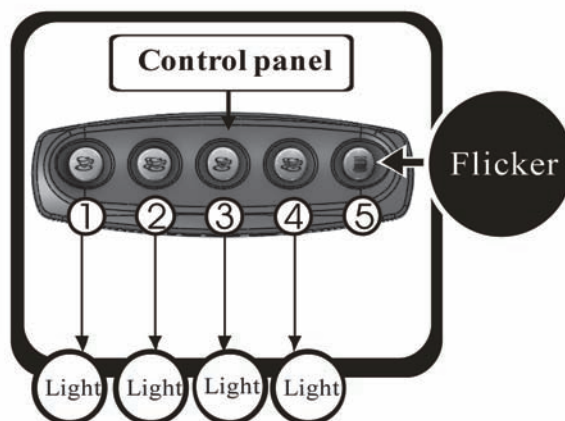
NOTE: For model CS1, CS2, and CS3 machine, the control panel of two or three brewing groups will copy the right ones' setting spontaneously. If you want to set up differently for each panel, please first program the right group, and then the left.

8-1-1 Turn on the programming switch (see fig. 8-a), then start to program.



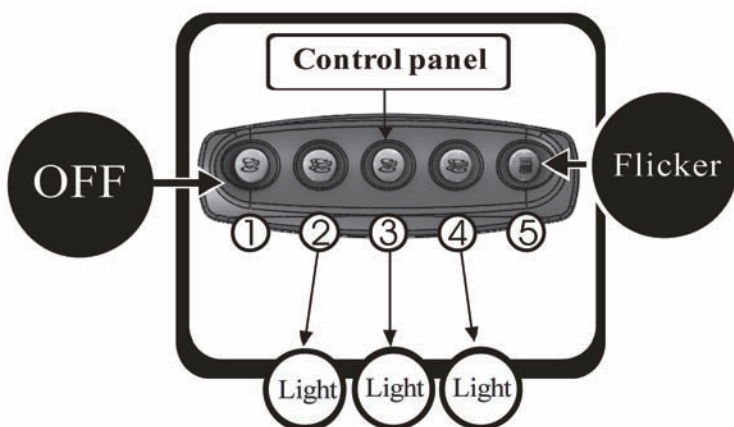
(fig. 8-a)

8-1-2 The LED of ① - ④ buttons on control panel will be lit, the fifth LED will flicker (see fig. 8-b). It means we are in the process of setting up the amount of continuous output.



(fig. 8-b)

8-1-3 Before setting up the first button, please put measuring cup under the brewing group. And then continue to touch the first button, and holding on the button until reaching the required amount of water. Keep you hand off the panel. Meanwhile the first button's light will be off, the other three buttons still lit, and the fifth button flickers (see fig. 8-c). It means the first button is programmed.



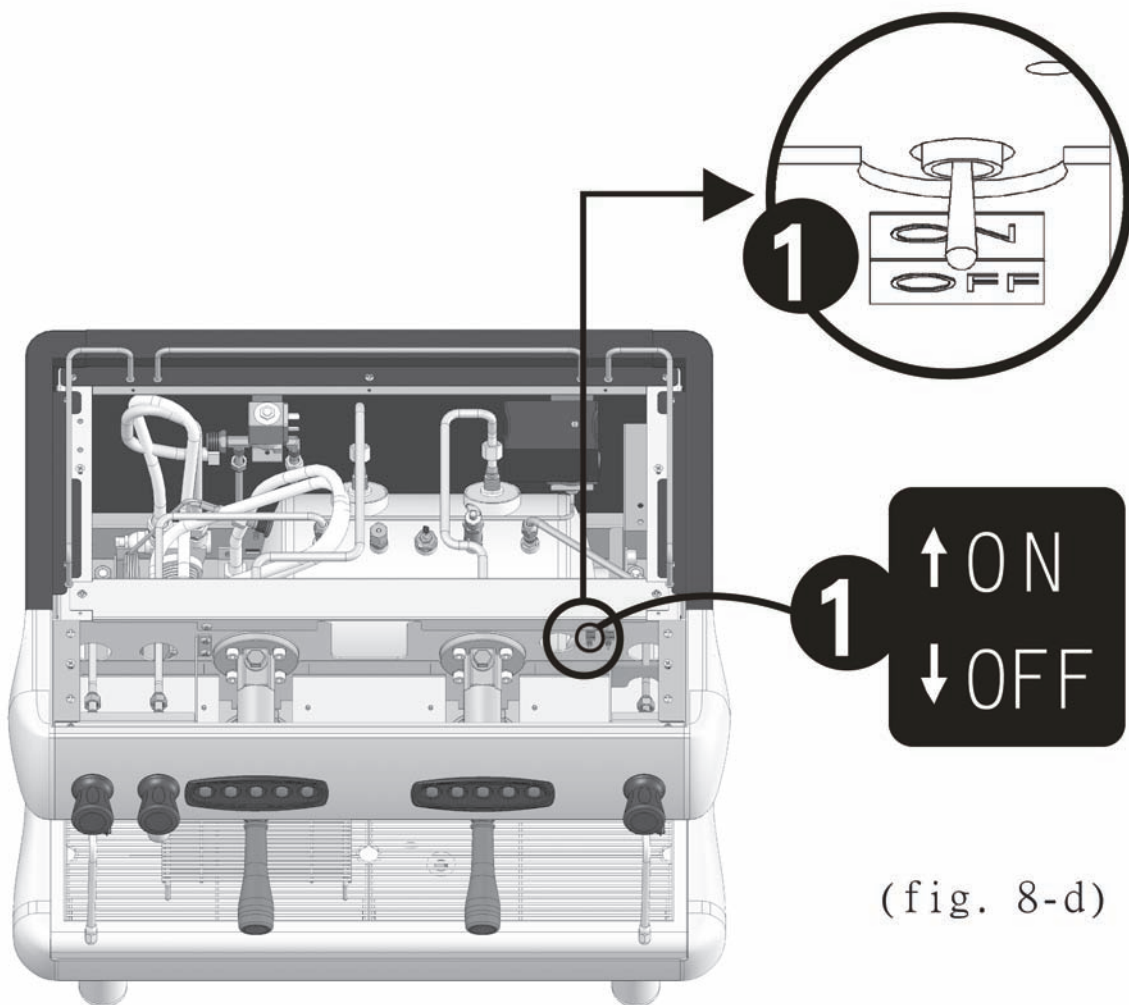
(fig. 8-c)

- 8-1-4 Repeat steps from 8-1-1~3 and finish the setup of ②, ③, ④ buttons with required amount of water.
- 8-1-5 When you finish the programming of these four buttons, turn the programming switch to OFF (see fig 8-a) and finish the setting up the amount of continuous putout.

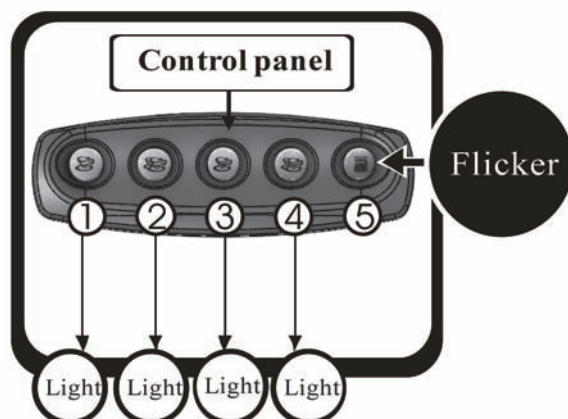
8-2 Programming for Teapresso, and Tea & espresso combo machines: MODEL: CS2T, CS2TS, CS3T, CS3TS, CSB2T, CST2, CSTSC2, CSTS2C, CST3, CSTSC3, CSBTC, CST2C, CSB2C

8-2-1 Espresso brewing unit

- 8-2-1-1 Turn on the programming switch (see fig. 8d)then start to program.

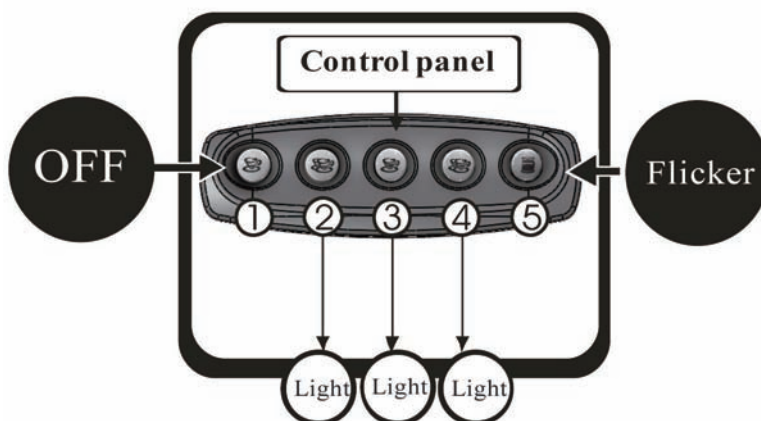


8-2-1-2 The LED of ①-④ buttons on control panel will be lit (see fig 8-e) and the fifth button flickers . It means we are in the process of setting up the amount of continuous output.



(fig. 8-e)

8-2-1-3 Before setting up the first button , please put measuring cup under the brewing group. And then continue to touch the first button , and holding on the button until reaching the requird amount of water . keep you hand off the panel , Meanwhile the first button's light will be off, the other three buttons still lit (see fig . 8-f) and the fifth button flickers .It means the first button is programmrd



(fig. 8-f)

8-2-1-4 Repeat steps from 8-2-1-1 to 8-2-1-3 and finish the setup of 2 , 3 , 4 buttons with required amount of water .

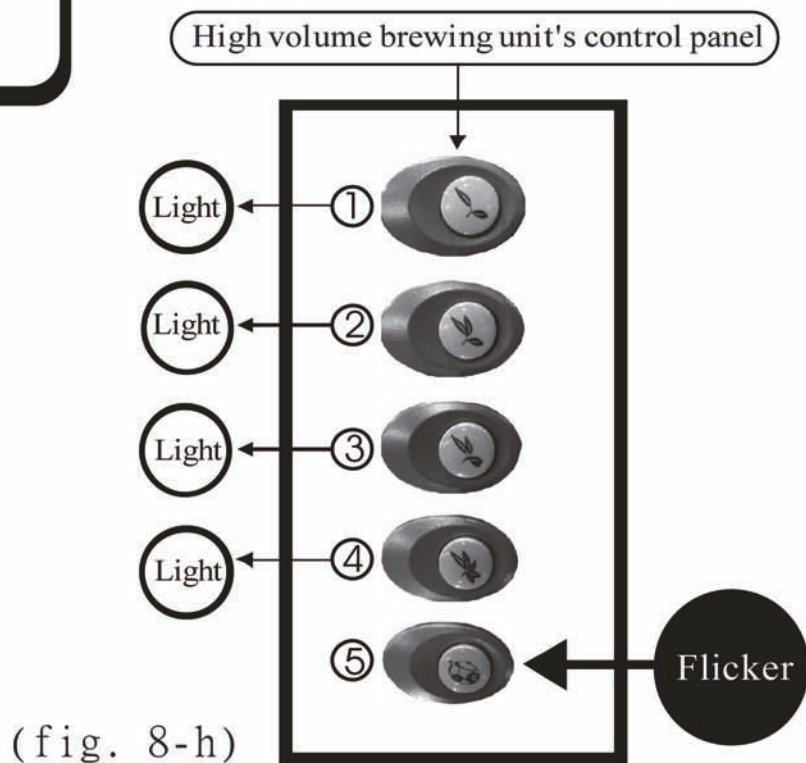
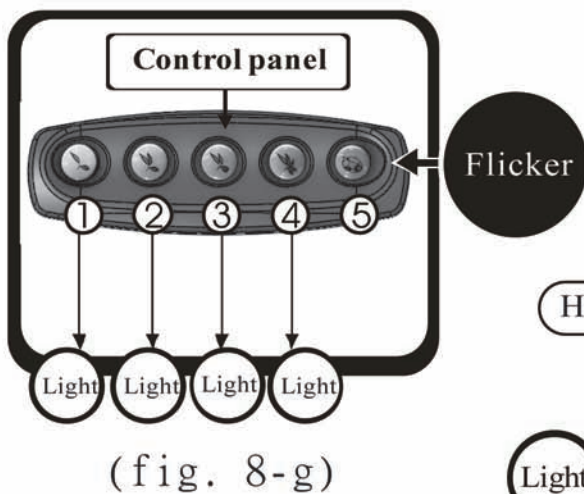
8-2-1-5 When you finish programming of these four buttons , turn the programming switch to OFF and finish the setting up the amount of continuous putput .

8-2-2 Teapresso brewing unit & high volume brewing unit

NOTE: there is not presetting in the factory. Please contact your service representative to consult tea & espresso programming detail. If you have had programming detail in hand, you may follow the steps below to set up the machine with stop watch and measuring cup.

8-2-2-1 Turn on the programming switch (see fig . 8-d) and then start to program .

8-2-2-2 The LED of buttons will be shown as fig 8-g and fig 8-h It means we are in the process of setting up the amount of continuons putout .

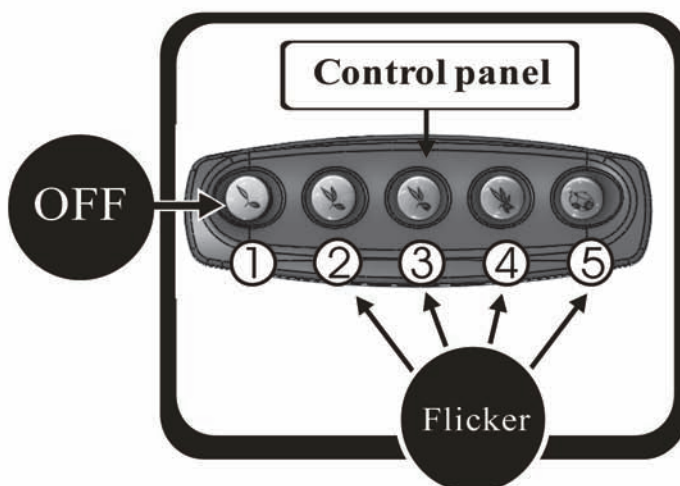


8-2-2-3 Press fifth button, entering the process of ‘multi-section pre infusion system’ with all buttons flickering .

8-2-2-4 After you press the fifth button , then you are entering the process of multi section pre infusion system . The principle for programming “multi-section pre infusion” is to 1) hold the same button for water delivery, and the machine will record the water amount ; 2) leave the button until reaching required time for soaking the material , and 3) touching the fifth button means finish the programming of this button .

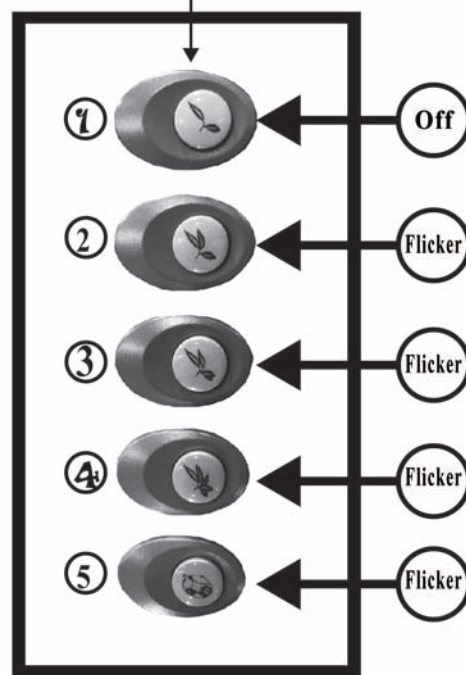
-Starting the setting of “ multi-section pre infusion ” for the first button , please touch first button until required amount water is delivered . Leave the button until the desired pre infusion time is reached . This is the first stage of pre infusion setting . If you don't want to extend another phase of pre infusion setting , press fifth button to confirm . If you want to set more phases of pre infusion , repeat step 8-2-2-4 1) - 2) . Make sure to press fifth button to confirm you finish the button programming .

-After finishing the programming for the first button , the lights of first button will go off , and the rest buttons will be flickering as fig 8-i and fig 8-j . This means the first button is successfully programmed and 2-4 buttons haven't yet being programmed .



(fig. 8-i)

High volume brewing unit's control panel



(fig. 8-j)

8-2-2-5 Repeat step from 8-2-2-1 to 8-2-2-4 to finish the multi-sectional programming for 2, 3, 4 buttons.

8-2-2-6 After you finish the programming for all the buttons, please turn the programming switch back to “OFF” position.

8-3 Temperature controller

For teapresso brewing unit, it is possible to adjust the boiler temperature by electrical temperature controller. Please see fig. 8-k to see the temperature controller and its function description.

1: The Yellow digits in the screen are the boiler temperature display.

2: red digits shows temperature that you set up.

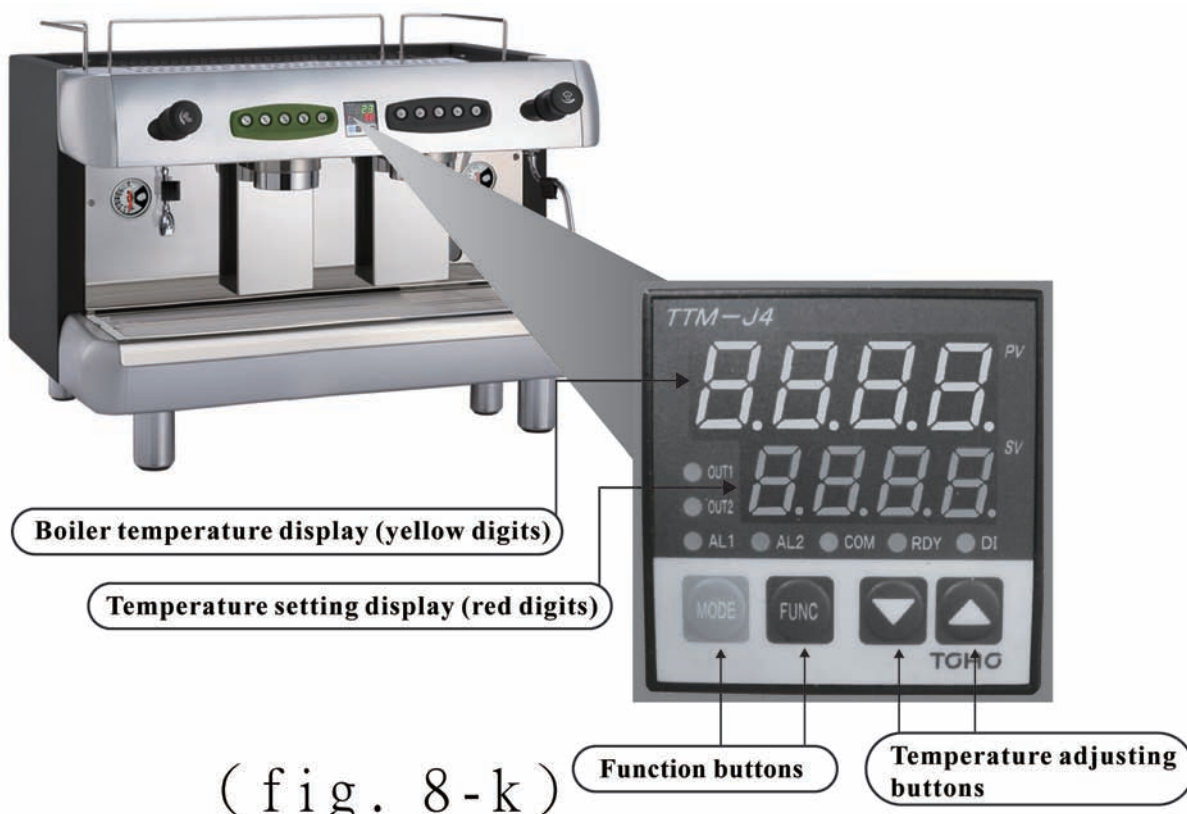
3. buttons in the right side corner is temperature adjusting buttons.

4. buttons in the left side corner are function buttons.

Press temperature adjusting buttons “up” to increase temperature, while “down” to decrease temperature. Please noted the adjustable temperature range is from 0°C-105°C. Setting is not possible if temperature exceeds this range.

It is possible if there is temperature variation about $\pm 2^{\circ}\text{C}$ between the display temperature and the setting temperature because of different operating environment. For function button, it is optimized and locked prior to leaving the factory so please do not operate function button.

(NOTE: for espresso brewing unit, please see 7-2 for temperature adjustment.)



9.USE

9-1 Use of Control Panel

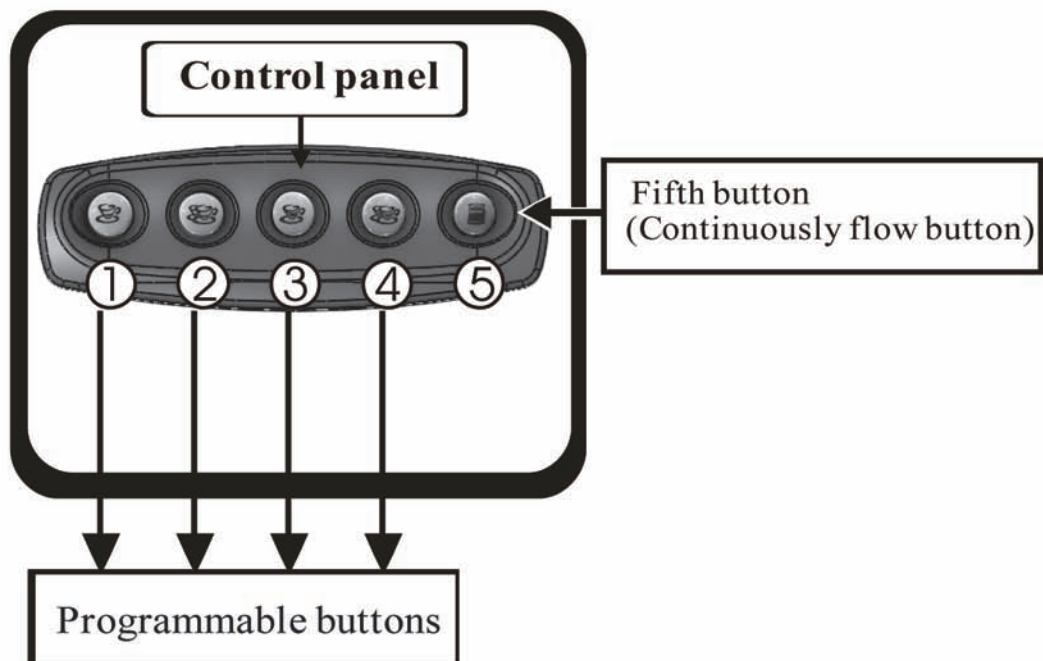
9-1-1 Espresso brewing unit

9-1-1-1 brewing fixed amount of espresso

Suppose you have programmed espresso output previously, please put ground coffee into a filter cup, use tamper to tamp the coffee firmly, and then fit it into the brewing group. Please press one of the four buttons, the coffee will be brewed accordingly to your previously set up. After reaching the required amount of espresso, the machine will stop automatically. If you want to discontinue the brewing, just touch the fifth button, the coffee flow will stop.

9-1-1-2 Continuous output

Don't need any previous setup, just put coffee into a filter cup and fit it into brewing group. Press the fifth button, and the coffee will be brewed. Touch the fifth button again and the machine will stop brewing.



(fig. 9-a)

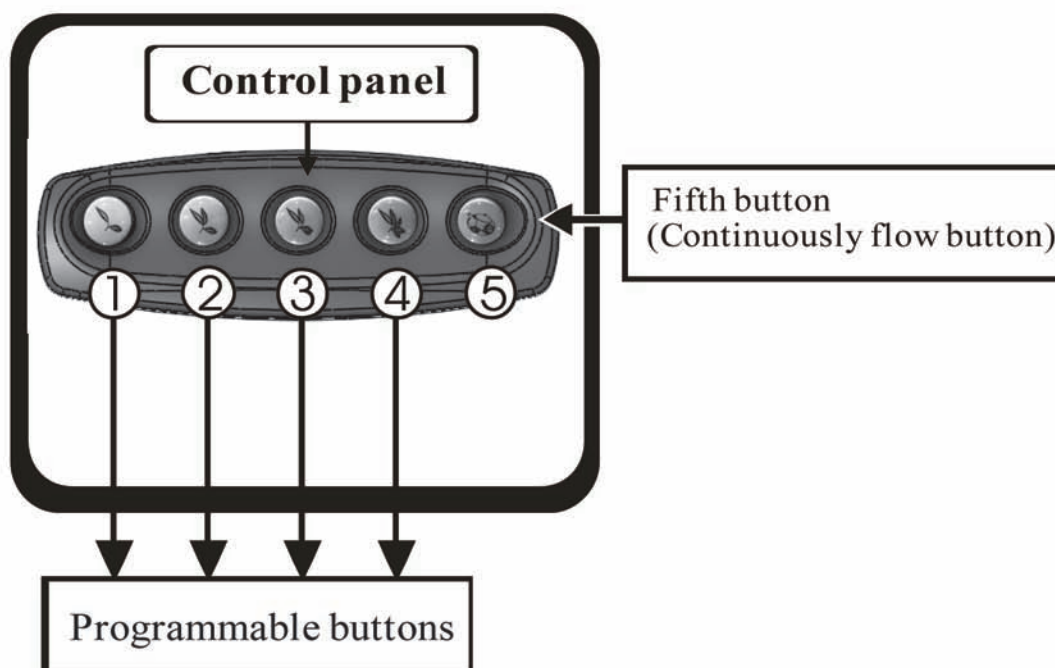
9-1-1 Teapresso brewing unit

9-1-2-1 brewing fixed amount of teapresso:

Suppose you have programmed teapresso output previously, please put “cut tea” or tea bag into tea porta filter and then attach it into the tea brewing group. Please press one of the four buttons, the tea will be brewed accordingly to your previously set up. After reaching the required amount of tea, the machine will stop brewing automatically. If you want to discontinue the brewing, just touch the fifth button, the tea flow will stop.

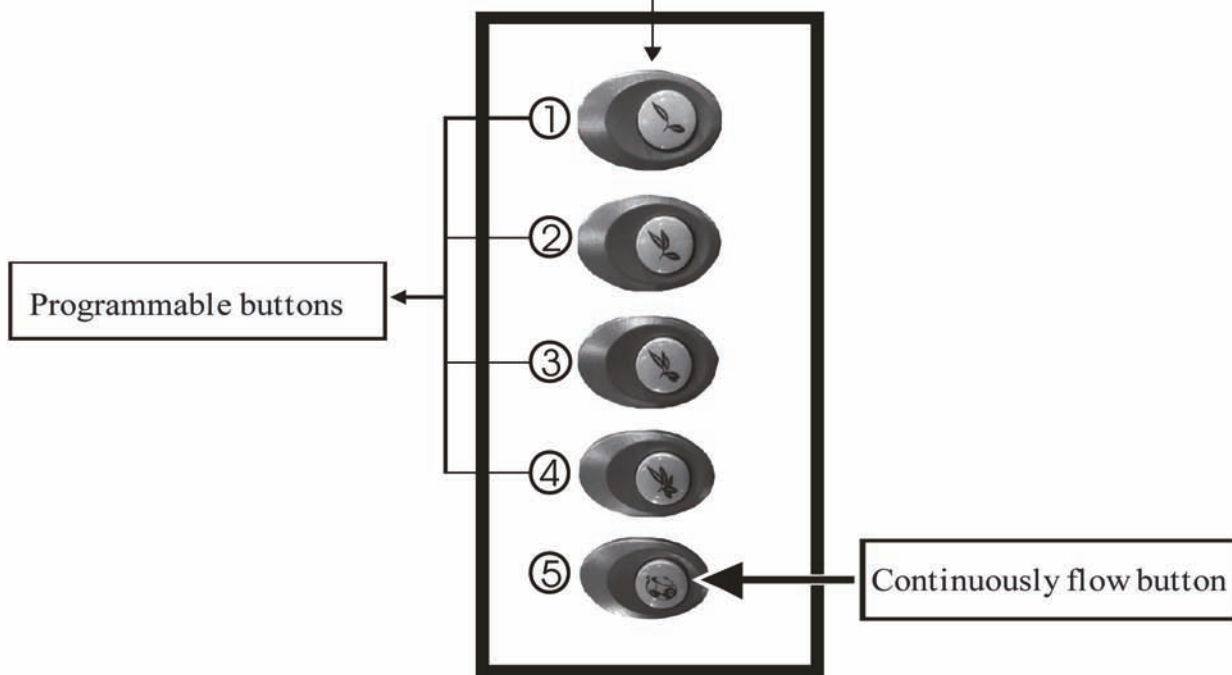
9-1-2-2 Continuous output

Don't need any previous setup, just put tea into a filter cup and attach it into brewing group. Press the fifth button, and the tea will be brewed. Touch the fifth button again and the machine will stop brewing.



(fig. 9-b)

High volume brewing unit's control panel



(fig. 9-c)

9-2 Steam Knob

Turn steam knob counterclockwise to draw steam through the steam wand. Steam output will increase the further the steam knob is turned. Turn the knob clockwise to reduce/stop steam putout.

You can also pull the knob in order to get steam.

9-3 Hot Water Knob

Turn the hot water knob counterclockwise to obtain hot water through hot water wand. Hot water output will increase the further the hot water knob is turned. Turn the knob clockwise to reduce/stop hot water output.

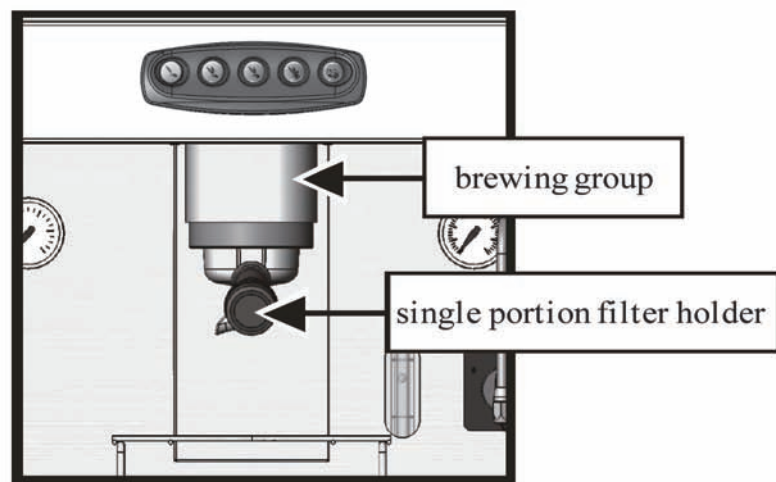
You can also pull the knob in order to get hot water.

9-4 Filter holder

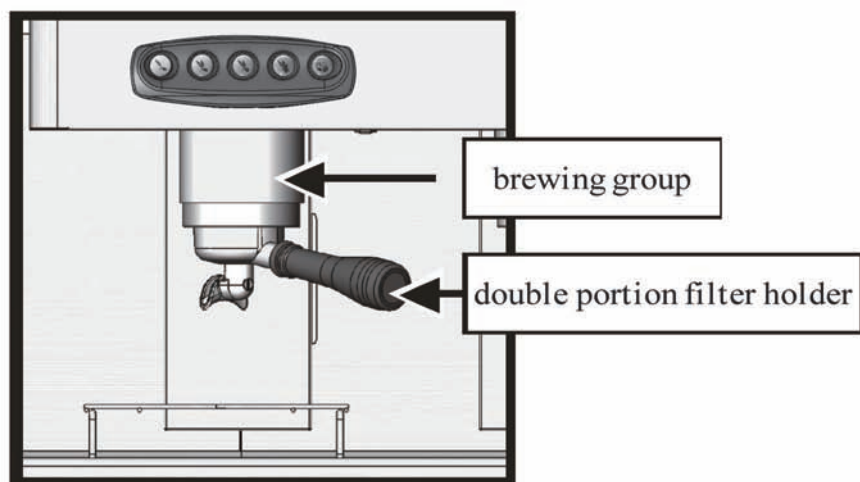
As tea and espresso brewing units are different, you need to apply different porta filter holders for different brewing units.

9-4-1 Espresso filter holder

For espresso brewing unit, please attach espresso filter holder to espresso group head. Single portion and double outlet filter holders are available for espresso brewing system as shown in fig. 9-d and 9-e.



(fig. 9-d)

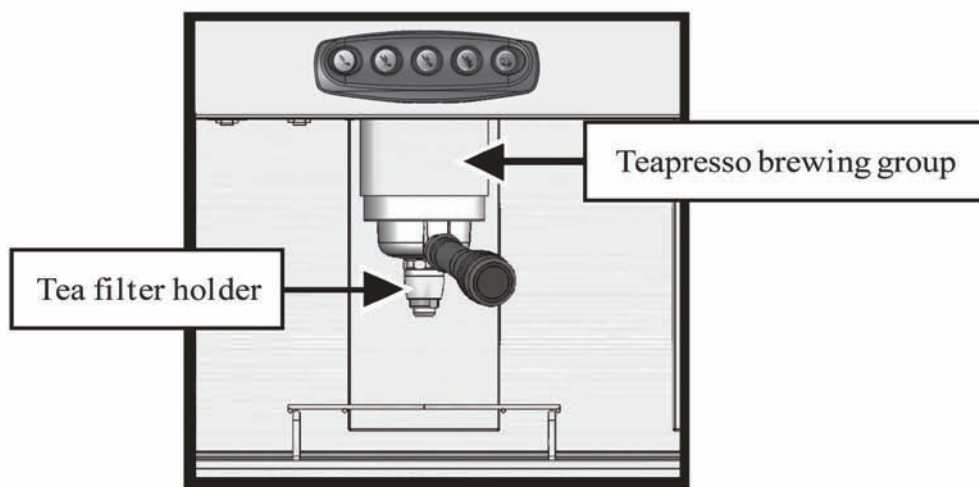


(fig. 9-e)

9-4-2 Tea filter holder

For teapresso brewing system, please attach tea filter holder to group head as shown in fig. 9-f.

High volume brewing system doesn't need to use filter holder.



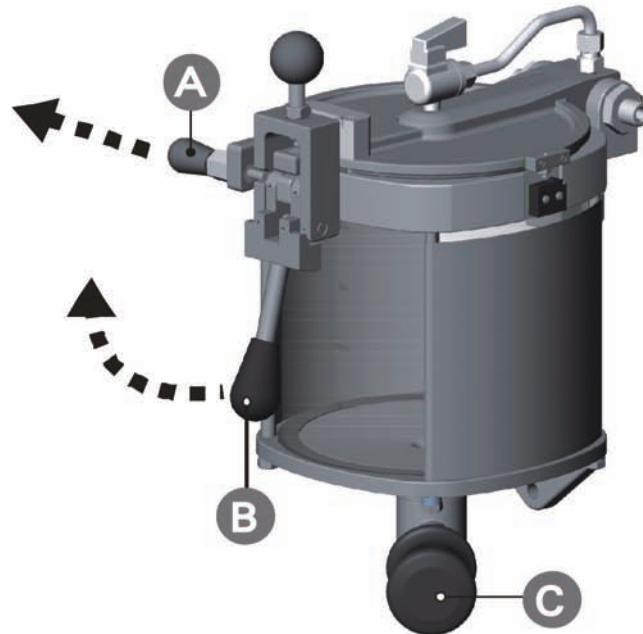
(fig. 9-f)



9-5 Use of High volume brewing head

9-5-1 Open the lid of the high volume brewing head

See fig. 9-g. Please pull the pilot pin (A) left, and hold the handle (B) up to open the top lid.



(fig. 9-g)

9-5-2 Stainless steel basket

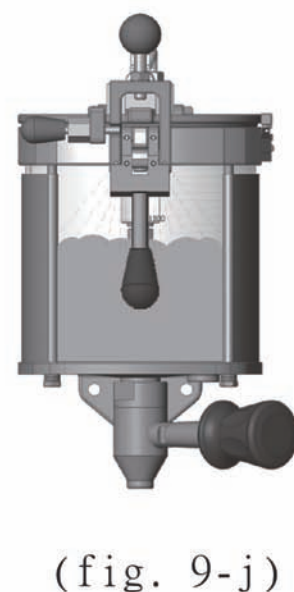
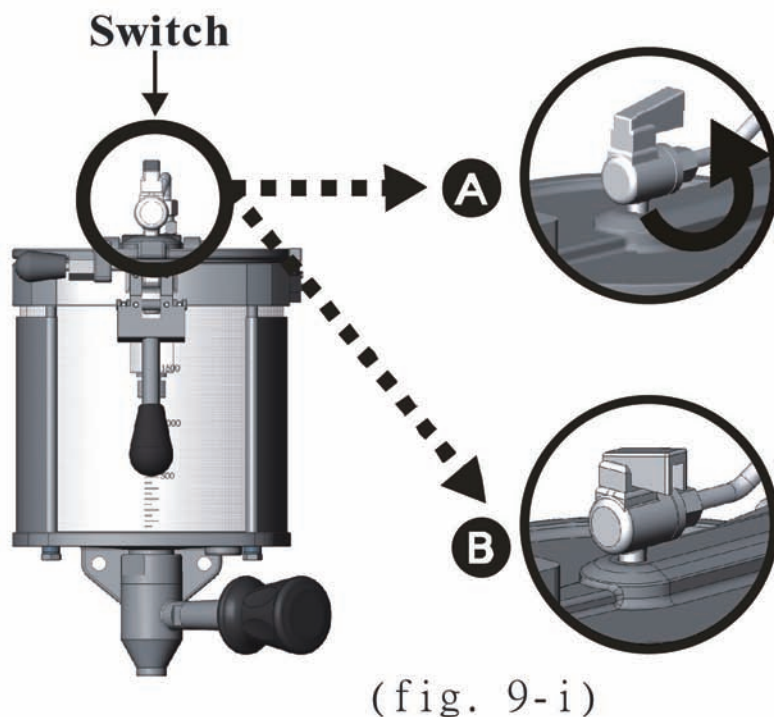
After the lid is open, a stainless steel filter (see fig. 9-h) will be found inside the high volume brewing head. Please take the filter from brewing head and put required quantity of tea or tea bag inside the filter.



(fig. 9-h)

- 9-5-3 After required tea amount is put inside the basket, please put it inside the high volume brewing head, and shut the lid.
- 9-5-4 Supposed you have already programmed the buttons as “8-PROGRAMMIN.” Please press any programmed button and the machine will brew tea automatically.
- 9-5-5 After the machine finished brewing tea, please turn on the water tap knob ❸ (see fig9-g) counter-clockwise to obtain brewed tea from the brewing head.
- 9-5-6 After the brewed tea is flowing out of brewing head, please open the lid, and get the basket from the brewing head, and shut the lid.
- 9-5-7 The use of water switch.

There is a water switch on the top of lid, see fig 9-i. turn the switch left as position ❶. the machine will be delivering radiating hot water and whirling steam for the best extraction result.



Turn the switch to the back as position **A**. (see fig 9-i), water will be flowing along the inner wall of the brewing head. This is designed for the use to clean the inner side of the brewing head to avoid mixed taste before you proceed to prepare another kind of tea brewing. Please perform this operation after you finish 9-5-6.

9-5-8 Safety Locking Lid

NOTE: Machine will **NOT** deliver any water or operate if the lid is not correctly shut in order to protect operators. Please make sure the lid is accurately shut before you operate the push buttons.

10.CLEANING AND MAINTENANCE

10-1 Instant Cleaning and maintenance

10-1-1 Brewing system

After each brewing, remove filter holder and press the fifth button to remove all residual tea and ground coffee from the shower screen which is screwed onto the group head. Then, fit filter holder to the brewing group again (important: don't fix it too tightly). Press the fifth button, shake filter holder to clean group gasket and remove residual ground coffee along side.

10-1-2 Filter cup

Rinse filter holder with hot water after each brewing to dissolve residual oils in the filter cup and prevent coffee oils from affecting coffee quality.

10-1-3 Steam Wand

After making steamed milk, use a slightly moistened soft cloth to wipe steam wand and steam nipple. After wiping, pull the steam knob to release a steam burst through the tube to remove any residual milk remaining in the nozzle.

10-2 Daily Cleaning and Maintenance

10-2-1 Cleaning the Machine Body

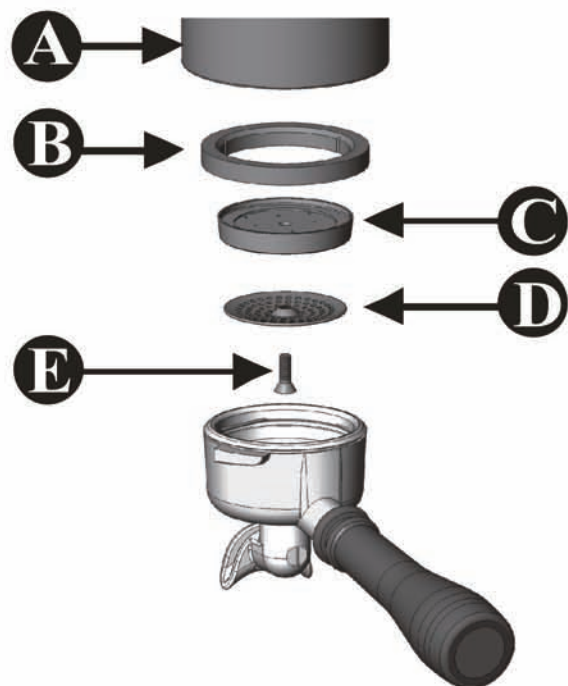
Wipe the machine exterior with soft, slight dampened cloth daily before starting operations. If necessary, a mild, non-corrosive cleaning agent may be applied to the cloth.

NOTE: Do not spray cleaning agent directly on the espresso machine body to avoid corrosion and possible damage to circuits.

10-2-2 Espresso and Teapresso Brewing Units Cleaning: Automatically back flushing feature

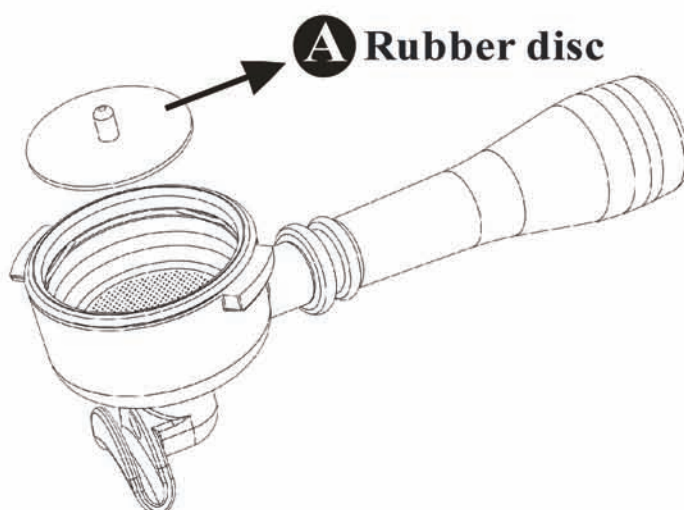
Brewing system needs to be cleaned every day by back-flushing function. Please follow procedures as below (refers to fig 10-a, 10-b):

- a. Remove screw **E** , shower screen **D** , and copper copper plate **C** from the group head (be careful, metal components may be hot).
- b. Place the rubber disc in filter cup (see fig 10-b), and apply about 2-3 grams of espresso machine detergent. Attach the filter holder to the group head and check for tightness.



A	Group head
B	Group gasket
C	Copper plate
D	Shower screen
E	Screw

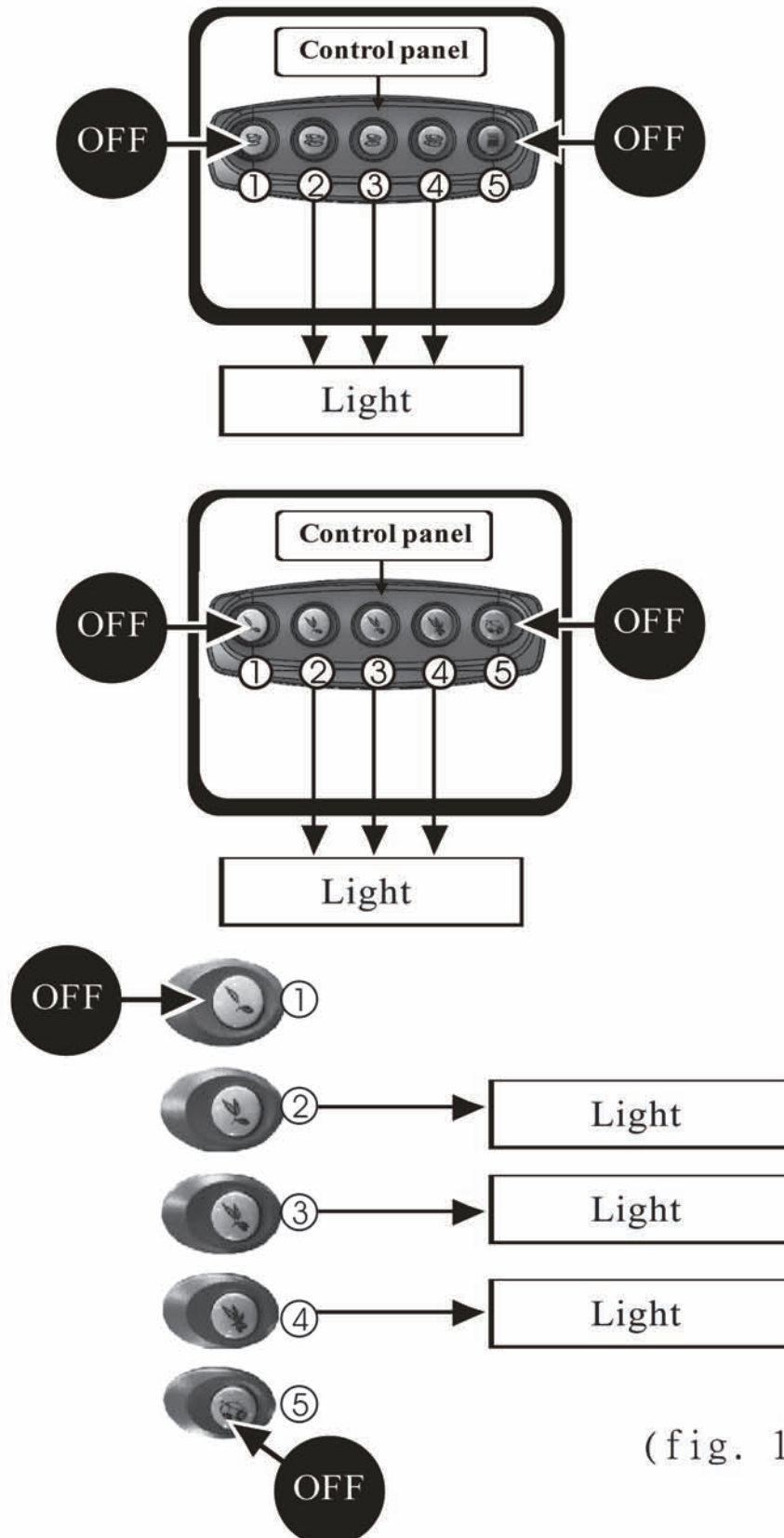
(fig. 10-a)



(fig. 10-b)

c. Press first and fifth buttons simultaneously to start automatic back flushing function.
The first and fifth button will be off, and middle three buttons will be lit. This auto back flushing system will do 10 cleaning cycles. (see fig 10-c)

NOTE: If you want to discontinue the cleaning, press 3rd button to stop.



(fig. 10-c)

- d. After the auto flushing cycle is done, release the filter holder, press fifth button and shake the holder to wash the gasket inside the group head. Continue process until water in the filter cup appears clear and clean.
- e. After flushing, remove the holder and press the fifth button to flush residual cleaning solution from brewing system. Turn off the fifth button after about one minute.
- f. During the flushing process, please rinse the copper plate and shower screen and use dampened cloth to clean them. Don't use scrub sponge or wire brushes.

10-2-3 High Volume Brewing System cleaning: Automatically back flushing feature

- a. Please apply 20 grams detergent (NSF approved) into the high volume brewing head.
- b. Press first and fifth buttons simultaneously to start automatic back flushing function. This auto back flushing system will do 10 cleaning cycles. **If you want to discontinue the cleaning, press 3rd button to stop.** (see fig 10-c)
- c. After auto flushing cycle is done, press fifth button to flush until the water appears clear and clean.

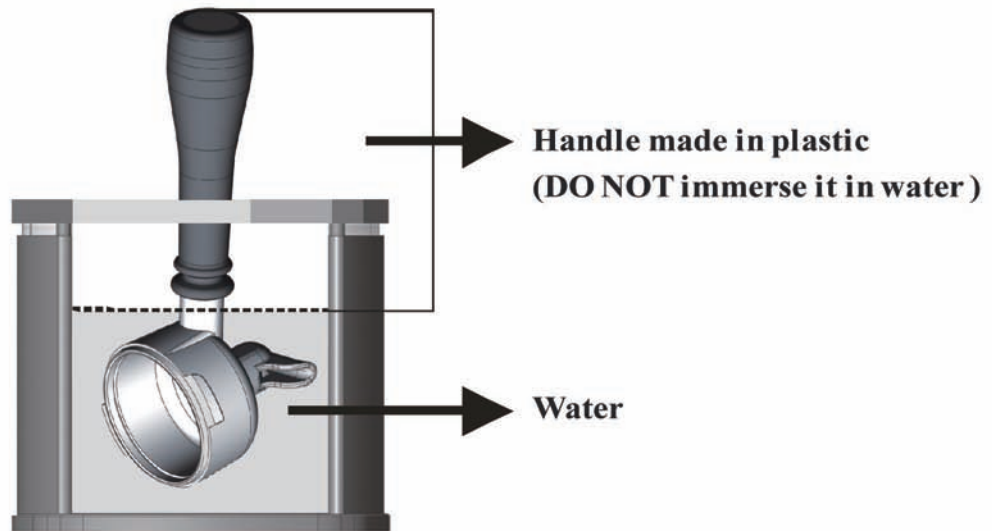
10-2-4 Cleaning of filter holder and filter

It is important to clean filter holders after your use the machine to ensure the best machine maintenance. Please disassemble filter holders (see 10-4) and clean them by proper tool. Please refer to 10-5 for detail operation.

Please use NSF approved detergent powder to ensure safety.

NOTE:

- For espresso filter holder and tea porta filter holder, the handle is made in plastic and should not be put into detergent otherwise the handle may be corrosive. To avoid any corrosion, please do not immerse handle in water.



- Do not put group gasket in water. (see item B in fig.10-a) in water or any liquid detergent.
- Espresso and Teapresso brewing groups have DIFFERENT copper plates. Please differentiate them before you install the copper plates back to the group head otherwise it can affect the tea and espresso extraction results.



**Copper plate for espresso
brewing group**



**Copper plate for teapresso
brewing group**

10-3 Periodically cleaning and maintenance

10-3-1 Boiler

In case any need to put away the machine for storage and you may not use machine for long, in order to prolong the boiler's lifetime, please turn off the machine, and release all the pressure from boiler by turning on the steam knob if machine is to remain idle for an extended period of time. After the steam is completely released and the pressure on steam boiler pressure gauge reads "0," please clean the drain tray and waste cup, and you may put it away for storage.

NOTE: Please DO NOT turn off the steam knob after the steam is released for storage. Keep the steam knob on.

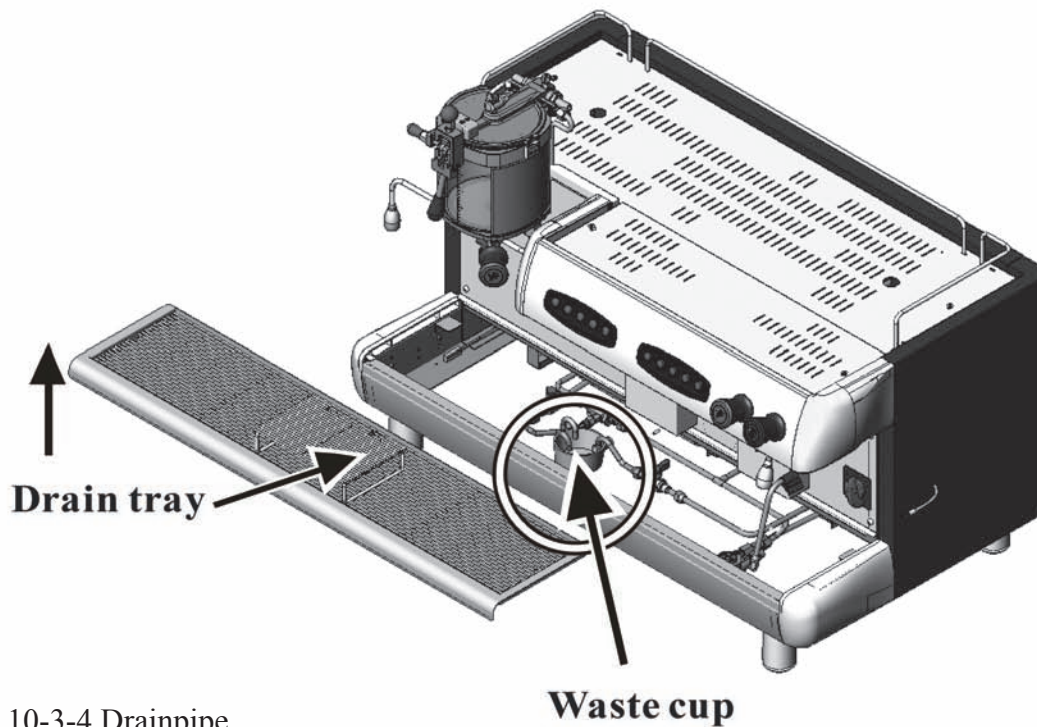
When you re-start the machine, do not turn off the steam knob until you see water drop from the steam wand. This is to balance the boiler pressure.

10-3-2 Drain Tray

Please turn off the machine, remove the drain tray from the machine, use water to rinse it and use cloth to wipe it, and place it back.

10-3-3 Waste Cup

After removing the drain tray, please use dampened cloth or napkin to clean the waste cup, and use hot water to rinse it. This will help clean the drainpipe.



10-3-4 Drainpipe

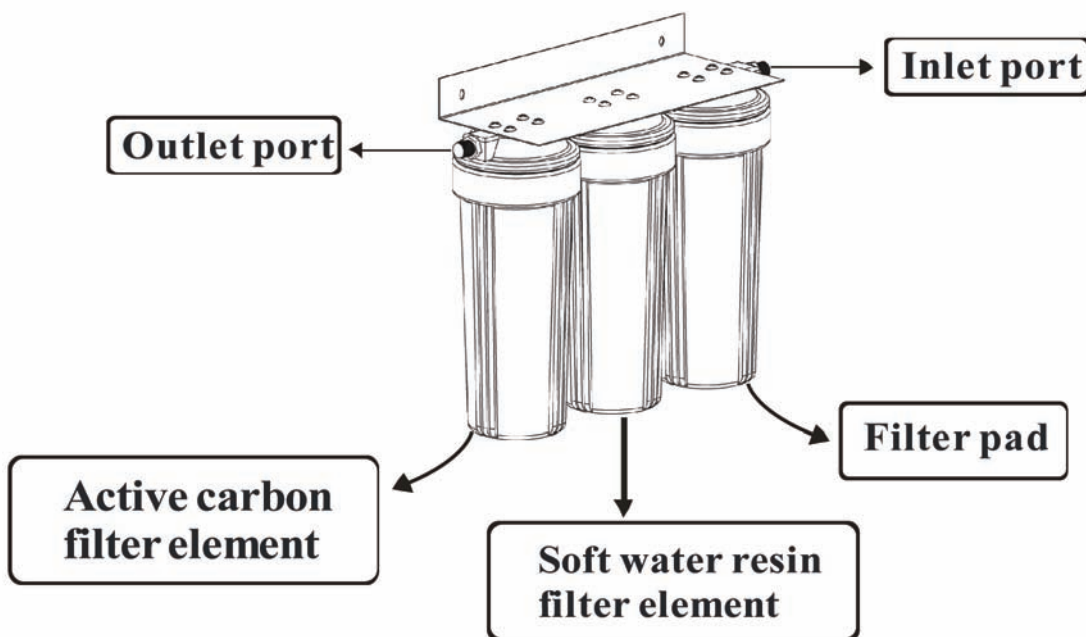
In case the drainpipe is clogged, place a teaspoon of espresso machine detergent into the waste cup, and rinse it with hot water. This helps dissolve coffee in the pipe and clean the pipe.

10-3-5 Filter

- a. The manufacturer recommends replacing the filter element on the resin exchange filter after processing 200 liters of water (about 3,000 – 4,000 cups of coffee). This schedule can be expected to vary based on the quality of water used in your machine.

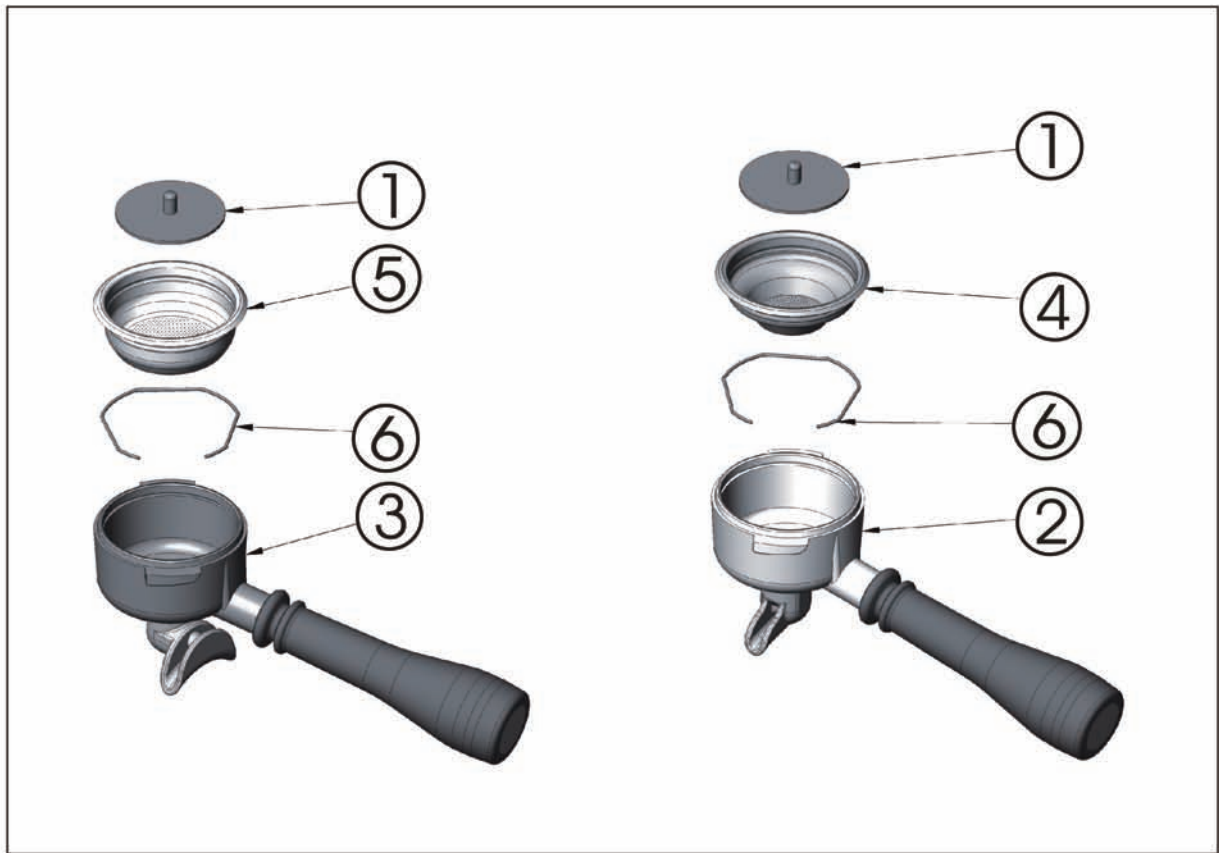
b. Replacing the Filter Elements

- Close the water inlet, place a water container below the filter, and remove the high-pressure water inlet hose from the machine.
- Remove the bottom cap from the filter and extract the spent filter element.
- Wash the upper and lower caps and then mount a new filter element. Turn the lower shell to secure it to the upper shell and tighten by hand.
- Open the water inlet and allow water to flow out from the filter gradually for about one minute in order to clean impurities from the filter. Close the water inlet and connect the high-pressure water inlet hose to the machine. Open the water inlet again. Start the machine machine following normal procedures.



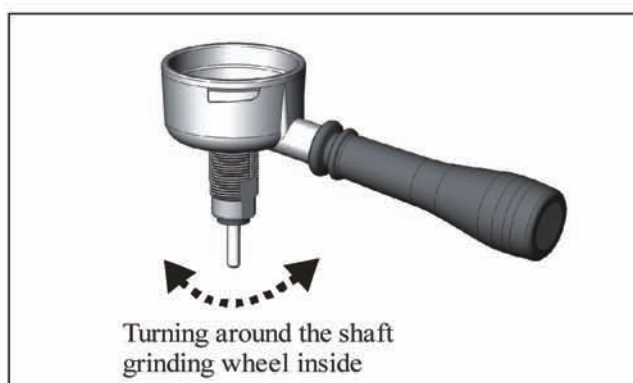
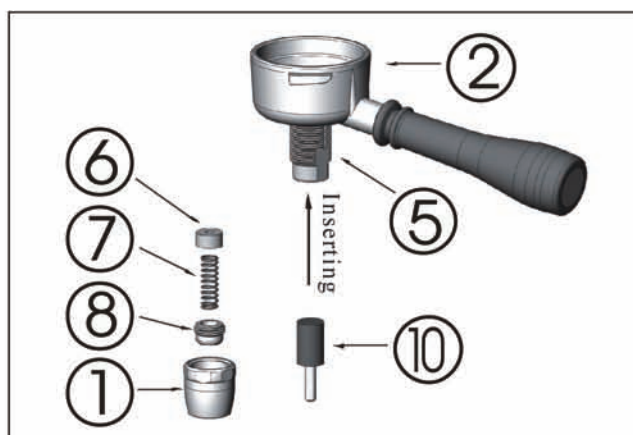
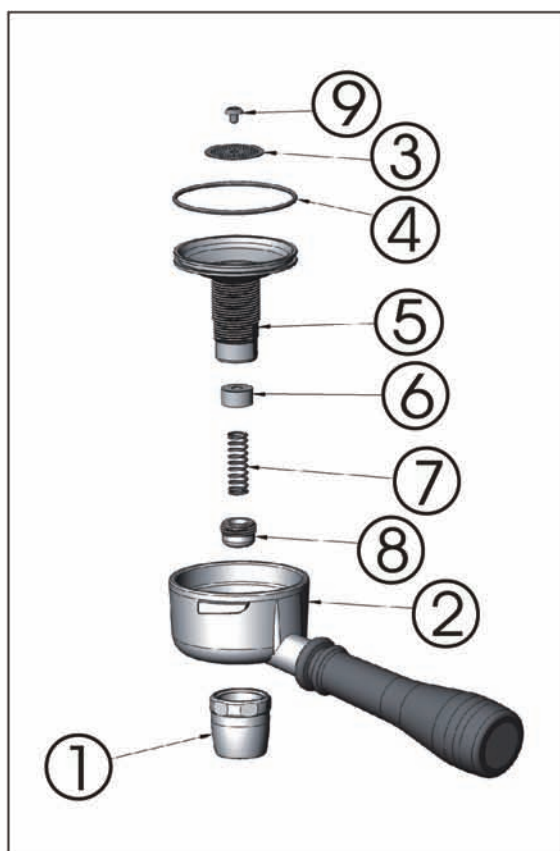
10-4 Filter holder diagram

10-4-1 espresso filter holder



①	Rubber disc
②	Single cup filter holder
③	Double cup filter holder
④	Single cup filter
⑤	Double cup filter
⑥	Steel wire

10-4-2 Tea filter holder



①	Water outlet
②	Filter holder
③	Steel filter
④	O-ring
⑤	Filter base
⑥	Bushing
⑦	Spring
⑧	Adjustable valve
⑨	Screw M4*5
⑩	Shaft grinding wheel

Please follow below procedure to clean tea filter holder

一、Remove number

⑥ ⑦ ⑧ ①

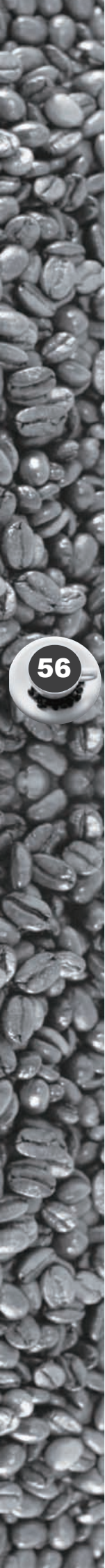
二、Insert ⑩ into ⑤

三、Clean the inner side hole of the filter base by turning around the shaft grinding wheel

10-5 Table of cleaning and maintenance

NO	Item	Check	Tool for cleaning
1	Group head		
2	Espresso filter holder & Teaspreso filter holder (see 10-4)		Brush
3	Espresso filter & tea filter		
4	Spring(tea filter holder only)	Check to see if any tea leaves get clogged	Brush
5	Bushing(tea filter holder only)	Check to see if it is stained	Brush
6	Filter base (tea filter holder only)	1. For the inner hole of the base, check to see if any tea leaves get clogged inside	Shaft grind wheel
		2. For the surface of the filter base, check to see it is stained.	Use dampened cloth to clean it. <i>NOTE: DO NOT use scrub sponge or wire brushes!!</i>
7	high volume brewing unit filter (see 9-5, fig. 9-h)		
8	Copper plate (see 10-2-2, fig. 10-a)		
9	Shower screen (see 10-2-2, fig. 10-a)		
10	Hot water sprayer		
11	Steam nipple		

Cleaning Operations	Daily	Weekly	Monthly	Annually
Please place +3g detergent powder in the filter holder and initiate auto backflushing system to clean the group head. See 10-2-2 for detail operation	☉			
<p>a. Put +12g detergent powder into 2L hot water in a stainless steel container</p> <p>b. Immerse these items in prepared hot water and leave it for one night</p> <p>c. Please rinse and assemble all these items before you start to work next day.</p> <p>NOTE : Please do not immerse the filter holder's "handle" which is made in plastic into water to avoid damage of handle.</p>	☉			
	☉			
	☉			
	☉			
	☉			
	☉			
	☉			
	☉			
<p>a. For hot water wand, there is a sprayer in the end of the wand. Please remove it from hot water wand.</p> <p>b. For steam wand, there is a nipple in the end of the wand. Please remove it from steam wand.</p> <p>c. Put 6g detergent powder into 500c.c. (about 17oz) boiling water in a stainless steel container</p> <p>d. Immerse the sprayer and steam nipple in water and leave it for one night</p> <p>e. Place them back in next working day before you start to work</p>		☉		
		☉		



NO	Item	Check	Tool for cleaning	
12	Filter pad (see 10-3-5)	Check to see if element gets stained		
13	Soft water filter element			
14	Active carbon filter element			
15	Drain Tray	Check to if any residual tea&coffee left on the tray		
16	Drain pipe			

Cleaning Operations	Daily	Weekly	Monthly	Annually
Replace new element			☉	
			☉	
			☉	
Apply some agent on a brush and clean the drain tray with hot water			☉	
Replace a new one				☉

11.SIMPLE TROUBLE SHOOTING

ANOMALY	STATUS	POSSIBLE CAUSES	SOLUTIONS
All lights on control panel turn on	<ul style="list-style-type: none"> After two minutes of water input, no water comes out from brewing group when you press continuously flow button. <p>NOTE : It will take more than two minutes to replenish water when the machine is used for the first time.</p>	<ol style="list-style-type: none"> 1. Water level probe does not function properly. 2. Water intake solenoid is out of order. 3.No water. 	<ol style="list-style-type: none"> 1. Make sure that the water switch is ON and there is water flowing into the machine. 2. Turn off the machine. Restart after 3 seconds. 3.Notify local dealer.
All lights on ONE control panel flash	<ul style="list-style-type: none"> No water comes out from brewing group. Brewing for a long time without reaching setup valve. 	<ol style="list-style-type: none"> 1. Coffee powder or tea is too fine grinded and clogged filter cup. 2. Water intake solenoid valve is out of order. 3.Flow meter is out of order. 	<ol style="list-style-type: none"> 1. Adjust coffee grounds and tea fineness. 2. Ensure water input is normal. 3.Press any key to eliminate the breakdown signal, and notify local dealer.

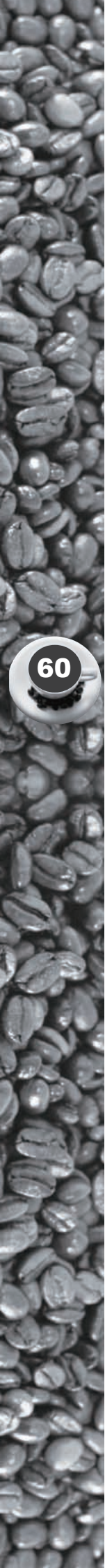


NOTE : Wait at least 3 seconds to restart the machine after turning it off to ensure previous data stored in memory is erased. Turning the machine on too quickly may cause the machine to function improperly.

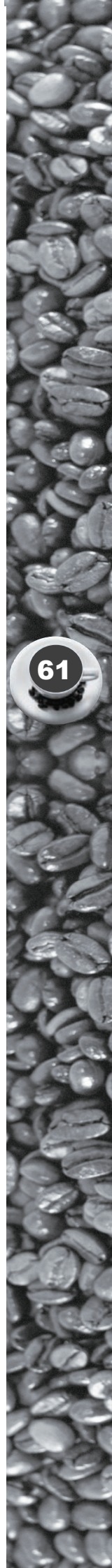
12.REPLACEMENT PARTS

(For reference)

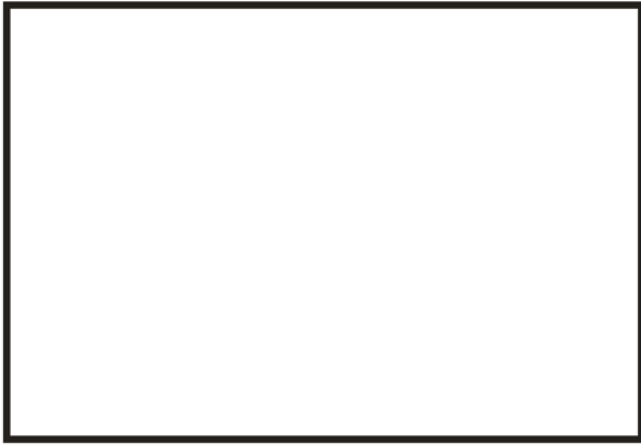
Item	Particular	Serviceable Life
1	Group gasket	3-6 months, depends on volume of tea or coffee brewed
2	Pressure relief valve	2 years
3	Safety valve	2 years
4	Filter pad	1-3 months, depends on water quality
5	Filter element (active carbon)	1-3 months, depends on water quality
6	Filter element (soft water resin)	1-3 months, depends on water quality



15 horizontal lines for writing.



15 horizontal lines for writing, evenly spaced across the lower half of the page.



Handwriting practice lines consisting of 15 horizontal lines.



Handwriting practice lines consisting of 15 horizontal lines.

